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Archives of Dermatology and Syphilology

VOLUME 17 APRIL, 1928 NUMBER 4

DERMATOLOGIC EDUCATION

TEACHING OF DERMATOSYPHILOLOGY (THE EDUCATIONAL BACKGROUND)*

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It must be accepted as a fact that the unusual man in medicine not infrequently achieves distinction in his chosen field from a humble educational background. Ambition to learn can cause a person to rise above insuperable difficulties in overcoming inadequate preparation for the acquisition of a detailed and highly technical education.

The history of medicine and of dermatology is replete with examples of men who have reached the highest places, handicapped by lack of training in fundamental subjects and without the early advantages which contribute to the culture of the physician. Such handicaps have doubtless often been the incentive to the tremendous effort necessary to achieve knowledge under adverse conditions. How far such persons might have gone with the added advantages of early training is, of course, speculative and problematic.

It may be taken, however, as axiomatic that in these days, at least, an educational background of the right kind is a sine qua non to the proper training of every physician, and is of even greater importance to the success of those who by electing special fields become courts of appeal for the rank and file of practicing men.

The subject of this symposium (dermatologic education) must be adequately discussed in order to cover the education of the medical student in dermatology and syphilology, the education of the specialist or the graduate student in these subjects, and lastly, the education and special qualifications of the teacher.

The essayists who follow me will discuss in detail the subject as it affects the undergraduate and practicing specialist. It would seem to be my function in initiating this discussion to cover rather broadly all

*Studies and Contributions of the Department of Dermatology and Syphilology of the University of Michigan Medical School; service of Dr. Udo J. Wile.

*Read at the Fiftieth Annual Meeting of the American Dermatological Association, May, 1927.

the aspects of the subject, but more particularly to comment on the educational background which must be common to all three groups as constituting the framework concerning which the student should be adequately instructed, whether he be undergraduate or graduate.

From a general standpoint, the educational background necessary as a foundation on which dermatology may be taught to the undergraduate is precisely the same as that which applies to medical teaching. The adequate discussion of this leads to the question of premedical requirements, which at this time is a matter of contentious discussion in medical centers throughout the country. Premedical education is today, owing to a variety of causes, in a fluid state. There has never been a time when a greater degree of uncertainty existed as to which studies the prospective student of medicine should pursue. I believe this uncertainty is due to the kaleidoscopic changes which are taking place in the science of medicine and the impossibility of foreseeing how far such changes will go. Apart from this cause is an evident desire for experimentation in pedagogic problems, which has made itself felt in medical teaching during the last few years.

The success of such experimentation and the necessary adjustments to the constant changes in scientific medicine will, of course, affect the teaching in all special fields, including that of dermatology, so far as they will affect medical teaching in general.

Certain changes in the premedical curriculum recently proposed will, I think, be a distinct handicap if generally adopted, not only in the presentation of the subjects of dermatology and syphilology to all medical students, but more particularly in the presentation of these subjects to that group of students who elect these subjects as a major field in which to qualify themselves as specialists.

I refer particularly to the proposal to substitute as premedical requirements for the modern languages, notably German and French, such subjects as are rather vaguely called "the humanities." As far as I can determine, such subjects as anthropology, sociology, paleontology and psychology are included under this head.

Although the acquisition of knowledge in these subjects by medical students in their premedical course may contribute largely to their general culture, I fail to see how the cultural aspects of such subjects are necessarily greater than those which accrue from the study of French and German.

Apart from this objection, the literature on the subject of dermatology, not only in its earlier days, but also today, gives eloquent testimony of the great contributions received and still being received from French and German sources. It seems to me, therefore, that next to the basic sciences of physics, chemistry and biology, a workable knowledge of French and German is of paramount importance to the

medical student and to the special student in this particular field. The displacement of these subjects by the so-called "humanities" as required courses is, I think, to be deprecated.

After discussing this point with a number of medical students, I believe that it is even arguable that French and German, particularly scientific reading in these subjects, might with profit be added to the medical curriculum. Many students complain that they were taught German and French so long before their premedical course that these studies are not of any use to them when they reach the medical school.

The discussion of the educational background of the graduate student of dermatology merits special attention by reason of the recency of cutaneous medicine as a field "sui generis," and because of its rapid evolution from a purely morphologic practical field into a field with biophysicochemical aspects. The voluminous and confused dermatologic nomenclature stands as a glaring example of the flat way in which dermatoses appeared to those who separated this field of medicine from that of general medicine, making of it a distinct department.

The designation of dermatology as a branch of medicine distinct from general medicine and surgery naturally resulted in absolute separation from these fields. For the first two or three decades, at least, this separation contributed largely to the ignorance of dermatologists concerning the fundamental underlying pathologic causes which reflect themselves in the skin. Doubtless this absolute cleavage was necessary in order to establish cutaneous medicine as an entity, and to give to the hitherto undescribed dermatoses some semblance of proper names based on morphologic characteristics.

During the past two decades, efforts have been made to bridge over the gap thus created by the forerunners in the field of dermatology. The undesirability of a new nomenclature and the ponderousness of the existing one contribute in no small way to the difficulty in reestablishing the interrelationship of dermatology with other fields of medical science.

Apart from the parasitic diseases, the few essential dermatoses and the benign and malignant neoplasms peculiar to the skin, dermatology, according to the modern conception, concerns itself with the aspect of the skin as a great organ which admirably reflects morbid processes elsewhere in the body in a great variety of ways. The proper interpretation of these various pictures—the recognition of their significance and of their importance to the underlying disease process—has become far more important than their classification as dermatologic entities based on gross morphology.

In no more important groups is this better illustrated than in the septic and toxic erythemas, in urticaria, in the exudative diatheses, including so-called eczema, and in cutaneous pictures associated with hemorrhage.

The recognition of erythema nodosum as an embolic process referable to either sepsis or toxemia, of petechiae as frequently indicating mild or severe sepsis and of urticaria and eczema as frequent manifestations of an enteric sensitization are but a few examples of the many instances in which the cutaneous pictures must be realined to the underlying constitutional causes from which they have been separated.

Modern bacteriologic studies have served to establish a sound etiologic basis for hitherto so-called essential dermatoses. The various rôles played by the streptococcus, the tubercle bacillus, other organisms and even filtrable viruses in the causation of cutaneous disease have necessitated distinct changes in the interpretation of such phenomena, which must be reflected in the presentation of these subjects to students.

The recent studies on allergy and sensitization not only have cleared up many conditions previously ascribed to such vague terms as idiosyncrasy and susceptibility, but have opened a splendid field for investigation which will doubtlessly lead to further clarification of symptom complexes that etiologically are still obscure.

The application of biochemistry and physics to the field of general medicine in the elucidation of disease phenomena has found a ready field of endeavor in cutaneous medicine. The application of modern methods of research along these lines has already borne fruit in the explanation of such unique pictures as xanthoma tuberosum, the cutaneous manifestations of endocrine disorders, hyperpigmentation and many other conditions.

The pedagogic presentation of the subject of dermatology has been distinctly modified by newer methods of treatment and by new instruments of great therapeutic value. The treatment of patients with syphilis by synthetic chemicals suggests the necessity of a basic understanding of organic chemistry. The extraordinary place which the roentgen ray, radium and other radio-active substances have in the present therapeutic armamentarium presupposes a considerable knowledge of the physical chemistry of these agents for their intelligent use.

The last two decades, therefore, characterized as they have been by such tremendous advances in the science of general medicine, have seen the reflection of these advances in dermatology. The broader concept of dermatology as "cutaneous medicine" has, therefore, completely changed the aspect of dermatologic teaching. No longer may one speak loosely of eczema, which in one instance may be due to a profound change in infant metabolism, in another to the result of trauma incident to occupation and in a third instance to an external irritant. Urticaria, previously regarded as a simple exudative change in the skin, must now be regarded as possible evidence of a general allergic state of the entire body, as an occasional forerunner of profound changes in the liver or

as an exanthematous manifestation of a general intoxication which finds its analogue in the stomach and intestine. A broader concept of the so-called erythema multiforme group, based on modern research, would regard the manifestations of these hitherto obscure phenomena as evidence of a septic erythema, such as is typified by scarlatina, on the one hand, and of toxic exanthems induced by enteric poisons, as typified by drug rashes and rashes caused by ingested foodstuffs and foci of infection, on the other hand.

Concerning the question of syphilology, the periphery of the knowledge concerning the natural history of this disease has shown an enormous advance not paralleled in any other field of medicine. The discovery of the spirochete and the application of biochemistry to the serodiagnosis of the disease and of synthetic chemistry in the treatment have increased tremendously the necessity for a workable knowledge in the fundamental subjects concerned with these modern concepts of the disease.

Because of the inherent resemblance between cutaneous disease and syphilis of the mucous membrane, it has always been held axiomatic that the practitioner of cutaneous medicine should also be a syphilologist. Indeed, it must be accepted that no man can be a competent syphilologist unless he is able to recognize and to differentiate all other cutaneous phenomena. The converse, of course, is also true; the dermatologist must be able to read with accuracy and to differentiate the cutaneous and mucous membrane phenomena of syphilis.

The inherent tendency of syphilis to resemble other cutaneous diseases is not, however, limited to the skin, but is seen in those diseases that belong in the field of internal medicine, where even greater difficulties in differential diagnosis are encountered. The student of syphilology, therefore, whether he is an undergraduate or graduate or a practicing syphilologist, should have a substantial background of training in internal medicine in order to appreciate properly and to interpret the morbid processes of syphilitic disease.

During the past two decades, increasing importance and increasing dignity have been accorded to dermatologists from those outside of this branch of medicine. This has been due largely, I believe, to the readiness with which dermatologists have been willing to abandon older theories based on morphology, and to adapt modern scientific discoveries as they apply to the solution of the phenomena of cutaneous disease. It may, I think, be justly stated that not only have dermatologists throughout the world accepted and applied these scientific advances, but they have contributed to them in no small way.

The ideal approach for the presentation of dermatology and syphilology from the pedagogic aspect should be with a perspective from the field of internal medicine, with which both subjects are so

closely alined and related. From the teacher's standpoint, a lack of a broad foundation in internal medicine is an overwhelming handicap to the intelligent interpretation of cutaneous disease.

In conclusion, it should be emphasized that the educational background of all medical students must be elastic; the requirements of today must be adjusted in accordance with the advance of medical science as they affect general medical teaching and as such advances in turn affect the problems of dermatology and syphilology.

The proper appreciation of specialists in dermatology and syphilology of the fundamental fact of the relation of these fields to the field of internal medicine and of the need for further research, which instead of separating these fields will bring them closer together, will lead to the increasing dignity of the specialty for which all its members should hope and aspire.

THE TRAINING OF A DERMATOLOGIST AND OF A SYPHILOLOGIST*

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Not long ago a man training for the medical profession merely served as an apprentice to a practitioner. Still later a course of lectures was required, and somewhat later two and even three courses were demanded. Only within the past thirty-five years or more have medical schools required three years and later four years of study from a man desiring to practice medicine.

From apprenticeship under a family physician, it was only a step to practice in the hospitals, and though hospitals have been established institutions for centuries, their desirability as places for study have been properly recognized only during the past thirty-five or fifty years. At present, there are clinical clerk services in hospitals, and most states require hospital training for men desiring to practice within their boundaries.

During the last decade of the last century, institutions first demanded higher preliminary training of medical students; as a result of this, most schools require at least two years of study in a selected college, and many schools require three or four years.

These requirements have been a matter of evolutionary demand as the knowledge of disease has grown and as the demand for better trained physicians has come from the suffering laity. This, however, has been only in connection with the training of the family practitioner, who, it is firmly believed, will always have a place in the treatment of the sick. There must be a place for the man who is made the confidential adviser of the family concerning both medical and other problems. As medicine has become complicated, the demand has arisen that physicians be qualified in some one branch of professional effort. One of the older members of this association, Dr. William T. Corlett, has told me that when he first began the practice of dermatology at Cleveland, in the early 80's, he was scoffed at by his confrères. "You will starve to death," they told him. "There is no demand for a trained dermatologist in this community. The public does not require such a man." Nevertheless, the public has required such a specialist, and an age in which a proper type of specialization has arisen and

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* Read at the Fiftieth Annual Meeting of the American Dermatological Association, May 1927.

is being demanded is now at hand. It is a well known economic law that any new movement or new institution in the life of a nation or of a people is liable to be carried too far. The public scents the advantages, is blind to the disadvantages and the possible weaknesses, and demands the innovation; hence there is a specialist in this disease and in that disease almost ad nauseam. I wonder whether there will be an economic backfire to this if the public finds that what it is entitled to it is not being given. In this I refer to the properly trained and educated specialists. But how are these specialists to be trained and educated properly, and whose duty is it to perform this function and to tell them when they are ready to serve the public? Is it a function of the nation or of the state, or is it a function of the medical institutions? Should examinations be given, and if so, by whom? Perhaps I might say, by a section of the National Board of Medical Examiners. It is a problem for the members of this association not only to ponder, but to attempt to solve, or the American Dermatological Association is not doing its duty.

Perhaps some information of value in this connection may be gained by examining the situation in other nations and in the allied national scientific societies. Germany, for example, has gone far toward actually settling this difficulty. Actual legislation has not been evolved, but the German Dermatological Association has taken the problem into its own hands. This body has become so powerful that a man who is unwilling to satisfy the requirements of the association is not recognized, either by the medical profession or by the laity, and the apparent dilemma has been easily solved. A physician desiring to practice dermatology and syphililogy after receiving his doctor's degree spends three years as an assistant either in a clinic or in a hospital with a dermatologic department. One year of this time may be spent with a dermatologist as a collaborator. At the end of this period, the physician opens his offices in the desired location and is allowed to advertise three times in the city papers, stating his specialty and giving his educational qualifications. Moreover, he is then eligible for membership in the German Dermatological Association on recommendation of two of its members and after a two-thirds vote. After all, does this not do most toward keeping up high preliminary educational qualifications?

England, I regret to say, has as yet not solved this weighty problem. Dr. A. M. H. Gray, our guest during the past year, advises me that the question has been discussed in England several times, and that the presentation of a special diploma in dermatology by the medical examining bodies has been considered. Thus far, however, the question has only been discussed.

Professor Sabouraud advises me that while in France it is not legally necessary to take a certain course before a physician can become a dermatologist and syphilologist, the problem has been solved quite satisfactorily by the educational requirements for the position of interns in hospitals in France. The medical student desirous of becoming an intern in a hospital usually begins to take the examination about four years after he has started the study of medicine. During this interval he may, if he is already an extern, through introduction to the heads of one of the dermatologic services, receive an appointment, for example, at the St. Louis Hospital. After he has passed his examination, the intern generally plans to spend about four years in the hospitals, for as soon as his thesis is accepted and his degree is received, his internship is over. The candidate usually chooses to serve his internship in the practice of surgery or general medicine, and his service is selected by the chiefs, usually after an introduction. The service is of one year's duration, and thus in four years the candidate selects four different services; if interested, he may possibly secure one of these at the St. Louis Hospital. Interns especially interested in dermatology generally choose to specialize in internal medicine, as they can never become heads of services in the hospitals unless they have practiced internal medicine. After the interns have received their degrees, they are eligible for appointment by a chief as "médecin de consultation" and have the opportunity to study dermatology in a clinic while they are preparing to pass the examination for physicians of the hospital. Rarely does any one but an intern pass this severe competitive examination. Men desirous of becoming heads of services must choose this route, and even after they have passed their examination, they do not necessarily receive the hospital appointments they desire. They must accept unimportant posts first, and only later, through deaths and resignations, do they finally secure the choice dermatologic positions, for example, those in the St. Louis Hospital. The position of "chef de clinique" in Paris is connected with the faculty and is filled by competitive examinations given by the examining jury of the medical school in Paris. Here again the candidate must have been an intern in one of the hospitals. There are also one or two adjunct "chefs de clinique." These positions are likewise competitive. The professor of dermatology is chosen by the faculty from the "agrege professors," who have specialized in dermatology. He must be one of the physicians of a hospital in Paris. Thus it is seen that although in France there is no legal ruling concerning the training of a dermatologist, he must of necessity have had a certain thorough basic training because of certain municipal requirements which demand that he serve an internship in the hospitals as a prerequisite for all higher appointments in hospital and teaching positions. It is true that this applies

especially to the highest type of trained dermatologist, for a physician may declare himself a dermatologist and syphilologist after having finished his service as an intern in the hospitals or, in some deplorable instances, after having been only an extern, for there is no law preventing this.

Professor Johan Almkvist described to me the requirements in syphilis and dermatology in Sweden. They are separate branches. To become a syphilologist, the physician is required to act as an assistant physician for a period of two years in a hospital in which patients with skin and venereal diseases are treated, and at least three months of this time as a physician in an outpatient department. The dermatologist must spend two years in a similar hospital for both sexes, and at least six months of this time must be spent in a division giving roentgen-ray therapy. Almkvist rightfully complains that dermatology and syphilology should not be separated, and also that the physician practicing this specialty, which is so intimately connected with internal medicine, should have a training of at least six months in the latter science. He also says that in a country in which a shorter medical training is required, such as in America, the dermatologist should have at least one year's training in internal medicine. He thinks that the course of training in the outpatient department should last six months instead of three, and that as the normal dermatologic service has its own roentgen-ray department, the requirement in Sweden of six months' training in roentgen-ray therapy is unnecessary.

Professor C. Rasch informs me that in order to become a dermatologist in Denmark the physician must have a training of at least six years after he has passed the medical examination. During this time, the candidate must have worked for at least three years in one or in several mixed dermatologic and venereologic services, and for one year of this time he must have been first or second assistant. He must have spent six months in an internal medicine service, six months in a serologic service and three months in a department of contagious diseases; he also must have some knowledge of light and roentgen-ray therapy. The rest of the six years, the candidate may improve his general medical training as he chooses.

Professor Naegeli has told me that there are no legal requirements for a physician in Switzerland, but that the Association of Specialists in Switzerland demands that every physician desirous of the title of specialist in dermatology and syphilology must have at least two years of training in the dermatologic department of some university. These requirements have been in force for ten years, and Professor Naegeli informed me that at present the requirements are somewhat higher than this. Personally, he feels that a candidate should have had a dermatologic preparation of at least from three to four years.

I might add that inquiries were also made in some of the other European countries, but answers have not yet been received.

In the United States, however, one finds great difference of opinion concerning the preliminary requirements for physicians entering the different specialties. Unfortunately, the nation and the states require only the degree of doctor of medicine. Hence one is forced to turn to the American Medical Association and to the respective special societies for help and information. The American Medical Association has had this problem under consideration for some time, and four years ago I was one of a committee appointed to study the situation. After some discussion, the following was adopted as the minimum graduate course for a specialist entitled to practice dermatology and syphilology: (1) graduation from a class A medical school; (2) an internship in a general hospital in which the service, if not rotating, should be in internal medicine; (3) a clinical training either as an assistant in a hospital or dispensary having an abundance of dermatologic material or with a specialist in dermatology having a large practice; the hospital or the specialist should have available at least 1,000 new cases each year; (4) the laboratory training should give a working knowledge of cutaneous pathology and bacteriology, including both vegetable and animal parasites, and a knowledge of dark-field examinations and Wassermann tests. Finally, the total time required should be two years, or three, when the internship in a general hospital was included.

This problem is not one for the American Dermatological Association alone. Other special societies in this country have also been confronted with it, notably, the ophthalmologic societies, and the solution of the ophthalmologists comes nearer to giving the public well trained specialists than does that of some of the other societies. Other special societies sometimes have written requirements but more often it is a matter of the general worth of the man, the amount of medical work that he has done and the papers that he has written. Moreover, these requirements are rather those demanded of men applying for membership in the respective organizations.

The American Urological Association requires merely that the candidate shall have been in practice for not less than five years and that he has devoted two years of his practice to the practice of urology. The application must be endorsed by two members in good standing. In the American Surgical Association, an exclusive society, the proposal of a candidate for fellowship must be signed by three fellows. No one is eligible who is under 30 years of age, and he must have graduated from the medical school five years before. Moreover, he must have an established reputation as a practitioner, author, teacher or original inves-

tigator, and he must have been recommended by the council. Here apparently, the association depends more on the real standing of the candidate than on hard and fast rules. In the American Orthopedic Association, on the other hand, much is left to definite requirements. The candidate that is recommended, based on data in regard to his preparation, standing, papers, etc., must remain on probation for a period of three years. He then prepares a paper, the result of some original work, which is sent to the secretary three months before the time of the regular meeting; this paper may or may not be read at the meeting. When an applicant is "laid over," which does not imply rejection, the membership committee requires an additional thesis before the candidate may be considered again for membership.

In the American Pediatric Society, more emphasis is laid on the applicant's ability and shown fitness than on hard and fast rules. About the same thing is true of the American Neurological Association and of several of the other societies.

As I have already stated, the American Board for Ophthalmic Examinations thus far probably comes closer to solving the problem than any other professional society in this country. This board has representation from the American Ophthalmological Society, from the Society on Ophthalmology of the American Medical Association and from the American Academy of Ophthalmology and Otolaryngology. Since 1913, the members have been working on better preliminary educational qualifications of those practicing ophthalmology. Their chief function, they state, is to establish standards of fitness for physicians who practice ophthalmology and to arrange, control and conduct examinations to test the qualifications of those who desire to take up this specialty. The members distinctly state that they do not desire to confer degrees, that this function should be left to the universities where it belongs, and that the board does not attempt to control the practice of ophthalmology by any license or legal regulation. It simply aims to establish a standard of fitness; for this it confers a certificate which is required by the American Ophthalmological Society and the American Academy of Ophthalmology and Otolaryngology of every applicant for membership.

Moreover, the members of the Board of the American College of Surgeons have agreed to accept this certificate in lieu of an examination in ophthalmology, and this certificate is required of candidates for appointments in some important positions and of hospital trustees in some localities. Naturally, it requires time for information concerning the certificate of the board to get abroad, but up to Jan. 1, 1926, about 502 persons had received the certificate, and the Board had held examinations in most of the large cities of the country from 1916 to 1925.

In a word, applicants for examination are divided into three classes: (1) those who have practiced ten years or more in ophthalmology; (2) those who have practiced five years and less than ten years, and (3) those who have practiced ophthalmology less than five years. The board requires presentation of reports of from ten to fifteen cases of varied character, which have been studied thoroughly; it also requires a degree from a medical school of high standing, a year of clinical hospital experience, preliminary and special study of ophthalmology and service as an ophthalmologic intern. It also requires a certificate of one year's service in an ophthalmic clinic, internship of one year in an ophthalmic hospital or assistantship in private practice with a specialist in this line of work.

The examination consists of the applicant's professional record, his written report, a practical, clinical and laboratory examination and a written examination, which may include anatomy, physiology, embryology, elementary physiologic optics, and principles of ophthalmology. The practical examination is rather extensive; it consists of an examination on external diseases of the eye, ophthalmoscopy, refraction, testing of ocular muscles, relation of ocular diseases to diseases of other parts of the body, therapeutics and operations.

It is my opinion that the entering wedge in the governing of special branches of medicine in the United States has been made by the American Board for Ophthalmic Examinations. I thoroughly believe that some such scheme could be adopted by other special societies in this country with profit, and that perhaps such a scheme could be worked out by the American Dermatological Association in collaboration with the Section on Dermatology of the American Medical Association. Perhaps these two societies, in collaboration with the National Board of Medical Examiners, could work out a scheme of preliminary educational requirements and hold examinations for those who desire to specialize in the practice of dermatology and syphilology.

Moreover, I wonder whether the American Dermatological Association is not destroying its real purpose in keeping its limited, hand-picked membership. Is it not possible that by laying down certain definite, rather rigid preliminary educational requirements for the dermatologist and syphilologist, the association could do more good if it would admit any one who satisfied these requirements, provided that he was recommended and seconded by two of our members, and received a two-thirds vote of the general membership? Perhaps also it might be a good plan for him to furnish a thesis, similar to that required by the American Orthopedic Association. The German Dermatological Association seems to have done a real piece of constructive work on some such a basis, and it gives food for thought.

CONCLUSIONS

I have attempted to analyze such legislation as has been evolved in regard to preliminary training of the dermatologist and syphilologist in certain foreign countries, notably Germany, Sweden, Denmark, France, Switzerland and England. In England nothing has been done as yet. Denmark comes closest to the summum bonum with legal requirements of six years' training. Sweden requires two. In Germany and Switzerland the problem is well solved by the physicians' associations, these associations admitting to their membership only physicians who have satisfied the rules concerning preliminary training. In France, the institution of the internship in the hospital, and its basic requirements for all further higher medical education, solves the difficulty.

In the United States, the members of the American Board of Ophthalmic Examinations seem to have come closest to a real control of the practice of their specialty by well trained men only. Their work has been recognized by the College of Surgeons, by many hospital trustees for appointments and by universities in making appointments. I believe that their scheme might be one of those to be seriously considered by the American Dermatological Association in raising the standard of education of men taking up the specialty of dermatology

In view of the available data I have been able to collect, both from home and abroad, what should be the preliminary training of a dermatologist and of a syphilologist? The graduate of a class A medical school, one reading at least two foreign languages, should first have the advantages of an internship either in internal medicine or of a rotating service in well known city hospitals, for example, the Cook County Hospital in Chicago, the Blockley Hospital in Philadelphia, or the Bellevue Hospital in New York. This service should be of from one to two years' duration. It is impossible for a physician to prepare himself properly for this specialty unless he has had thorough groundwork in the diagnosis and treatment of patients with conditions in the field of internal medicine. Moreover, dermatology and syphilology are so closely connected with general medicine and with the general working of the human body that this is an absolute essential. When the candidate has convinced himself that he desires to take up this specialty, I believe that he should be prepared to spend at least two, and probably three, more years in further preparation for his life work; only then will he be in a position to offer himself to the medical profession and to the public as a real specialist. During this time, he should study these diseases both from a gross and from a histologic standpoint. Moreover, he should have made himself conversant with all modern laboratory methods in connection with metabolism, studies of the blood, studies of exudates from the human body, serology, etc. He should also have had good groundwork in roentgen-

ray and radium therapy, and he should at least be thoroughly conversant with the basic principles of mycology. Whether this work should be done in an approved office or in an approved hospital or university hospital, is immaterial. Much more depends on the type of service offered in some hospitals and in some offices and on the amount of material studied. I am acquainted with some offices offering a service which would be superior to some hospital services, and vice versa. I am inclined, however, to believe that a combination of the two might in some cases work satisfactorily and be of benefit to the student. For example, a physician might spend two years in a university hospital, followed by one year in a selected type of office.

Several methods are suggested by which the American Dermatological Association might be of great service in raising the educational qualifications of those desiring to take up this specialty: (*a*) by recognizing as eligible for membership only those physicians who have carried out a certain type of study over a stated period of time; (*b*) possibly by instituting a Board of Dermatology and Syphilology much like the American Board of Ophthalmic Examinations for the purpose of drawing up certain educational requirements and perhaps of acting as an examining board.

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THE TEACHING OF DERMATOLOGY AND SYPHILOLOGY TO THE MEDICAL UNDERGRADUATE *

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Four questions form the outline of this discussion of undergraduate teaching in the field of dermatology and syphilology. To what extent are dermatology and syphilology specialities? To what extent are they to be taught as such to medical students? How does the specialist, as a teacher, represent his group and influence its standing, the content of his field and the prestige, ideals and opportunities of his confrères? Which method of undergraduate teaching serves the interests of the patient better: that which makes the practitioner so much of a dermatologist and syphilologist that he needs a specialist only to carry out some manipulative procedure which calls for apparatus, or that method which gives him only a general knowledge of the field, and leaves him handicapped in diagnosis except in the most obvious situations, and incompetent in treatment? The question of the influence of teaching methods on the immediate welfare of the patient is, after all, the crux of the undergraduate problem; for the advancement of knowledge and medical science in the field is an aspect of graduate rather than undergraduate training.

GENERAL PROBLEMS

Every specialist who teaches should examine critically the rational basis of his specialty to determine the cause for its existence. Every form of special practice involves two phases: one is intellectual and the other, manipulative. Which of these shall furnish the keynote for the dermatology and syphilology taught to undergraduates? Some specialties are becoming so purely manipulative, so completely dominated by technic, that their practitioners are the servants of other medical men who exercise judgment for them, and, like Rossum's Universal Robots, employ them as mechanical vassals, trained to manipulation rather than to thought. Other specialists, the so-called diagnosticians, do not make any pretense at manipulative therapeutic skill. They collect, collate and co-ordinate observations brought to them by their medical and technical dieners, and assemble them into a diagnosis of

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the patient's ailment. Then, like a rabbit from a hat by an act of prestidigitation, they produce a prescription for his treatment and refer him elsewhere. Dermatology has its manipulative phase, growing ever more prominent with the perfection of electrotherapeutic and radiotherapeutic machinery and buoying up the shallow minded person by a glittering tinsel of nickel-plated instruments and a chorus of buzzings, cracklings and whirrings. That the older dermatology of ointments and lotions had a vital manipulative phase, cannot be doubted by one who has seen the prodigious results produced by the fathers of the art by the clever jugglery of tars. But even this manipulative phase has had its degenerations—witness the equipment of the old time "skin" dispensary with its table in the middle of the twilight basement room, the printed card on the wall containing large numerals followed by stock formulas and the pads of prescription blanks on which these numerals were scribbled and handed to patients whose dermatologic examination almost invariably began and ended with the question, "Do you itch?"

Syphilology, too, can, with equal ease, be made a manipulative pseudo-specialty, under a "Department of Intravenous Injections." The spectacle of the owner of a roentgen-ray machine, or a radiologist who should know better, "burning" off the eyebrows, or the back of an eczematous hand, because, having the machinery, he becomes *ipso facto* an expert, is mechanism and manipulation run riot. No less absurd is the picture of the "diagnostician" with his records of examinations of urine, blood counts, chemical examinations of the blood, roentgenograms, test meals and skin sensitization tests, prescribing a rigid dietary regimen and a trip to Bermuda for a patient with scabies. While modern specialism must have its mechanistic and instrumental phases, the earmarks of its legitimacy are, I believe, fundamentally intellectual and dependent on depth of experience, breadth of knowledge, superior insight and reasoning power and ability to use the five or more senses in search of the diagnostic clue, rather than on mere physical equipment.

A specialty should be taught to medical students with the intellectual foot forward; that is, as a form of medical culture. They should learn to examine and to see, to describe and to reason from observation within a particular functional or structural field. Thus conceived, the teaching of a specialty is part and parcel of the general medical education of the student—a training in method and approach much more than in mere fact. It is proper for teachers, and, I believe, in harmony with the purposes of medical teaching for the undergraduate, to look on the intellectual discipline of dermatology and syphilology as a developer of medical right thinking quite as much as a parcel of established knowledge. In many ways it is more important that the student have the examination of the stripped patient and the complete inspection of the

body surface so ingrained into his medical conscience that he can never feel right without it, than that he should learn a prescription for acne or a treatment for eczema. When dermatologists in their offices and clinics permit the 3 by 5 record card, the peek-a-boo and drop stocking examination, and forget the discipline of pure objective description and orderly differentiation, they easily become tradesmen, devoured by their patients and narrowed by mechanisms, rather than broadened by the intellectualities of their domain. Rightly conceived, the student, too often inclined from his previous training to substitute the patient's statements in the history for his own observations, must receive from the hands of a specialist his baptism in objectivity. The instructor's insistence that he shall not ask the patient any questions finds him nonplussed at first. But presently his powers of observation, undeveloped by the history taking approach, take on a new acuteness. After the first gasp of his cold immersion in October, the student comes to the surface struggling, stuttering, protestant. In March he delivers himself of extemporaneous clinical dissertations on new cases which astonish classmates, visitors and preceptor, no less than himself, by their completeness in observation and differential diagnosis. Dermatologists are, then, members of the medical faculty not alone because they are specialists, but because of the effective contribution they can make to the education of the medical undergraduate, in the form of a technic of diagnosis. They contribute a point of view to his fitness to practice surgery, obstetrics and general medicine, quite as much as to dermatology. This is a vital part of medical culture, and the student who once sees it effectively presented and who reaps its benefits, never forgets it, or its exponents.

The next obligation to the medical undergraduate is to teach dermatology as medicine and not as specialism. While all dermatologists recognize the importance of a special therapeutic technic and of physical equipment in the management of cutaneous disease, this phase of the work should receive less emphasis in the teaching of undergraduates, just as it receives more emphasis in graduate training. As a teacher of medical dermatology, one may properly stress examination and diagnosis at the outset rather than treatment. The teacher must be ready to make before the student every form of examination germane to the field of dermatology, and be able, likewise, to interpret all the observations from general and other special examinations into a medical whole. As in syphilology, the stethoscope, the sphygmomanometer, the palpating and percussing hand and even the ophthalmoscope must be constantly employed to knit dermatology to medicine and to unite it with the other specialties. Lacking these general contacts, the specialty appears too often to the student as a mere cosmeticism, skin deep, and simply a problem in good looks, separate and apart from the realities of delivering and feeding

babies, setting fractures and treating rheumatism. The reading of the dermatologic teacher, as of the syphilologist, in current journals should include the broad field of medicine. He serves his students and his specialty best when he can appear before them as a medical man conversant with, though not practicing, the most important aspects of all the medicine and surgery that borders on his field. In fact, he must be an internist, a neurologist and a surgeon, as well as a dermatologist in point of view, acutely aware of everything that contributes to the entire well-being of the patient, even though he enters with a cutaneous complaint. He must not be merely a "skin man," an electrician, a pharmacist or a dispenser of shots.

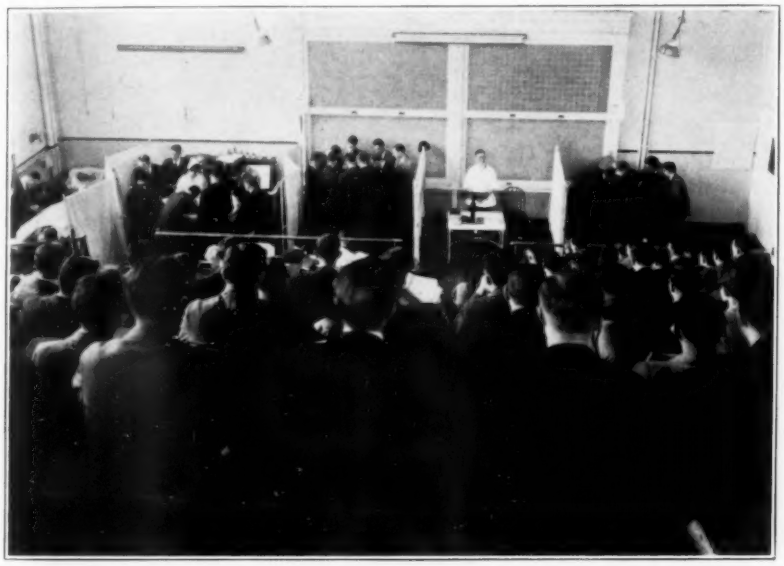

Fig. 1.—A dermatologic clinic before a class of 135 students conducted as a dermatologic society meeting. One fourth of the class is examining the patients and three fourths are engaged in discussion with the professor. Two students, an examiner and consultant, are carrying on a critical examination (from thirty to sixty minutes) of each patient.

In emphasizing the bearings of dermatology on medicine at large, I find it desirable in my own teaching to do and to avoid some things which may give to my technic a heretical flavor in the minds of some dermatologists. I obstinately refuse, for example, to teach the intricacies, or even admit the importance, to the undergraduate, of the old classificatory and taxonomic dermatology of the early Vienna school. A good long name now and then does no harm, and often breaks the tension with a laugh, but effective dermatology for medical students must be freed to some extent from overdescriptive nomenclature and

terminology, or it will not be held in mind. One should not attempt to make it merely sound learned even though we all love its reverberations. It is much better to spend the energy usually devoted to drilling in futile terminologic distinctions such as eczema madidans, eczema rubrum, lichen obtusus and lichen accuminatus, on studying the elementary lesions and evolutionary changes, and seeing them in the flesh. When classification in the field is so unconvincing even to initiates that a compend can be published, without protest, with the diseases in alphabetical arrangement, it is time to discard sonorous nothings such as atrophies and hypertrophies, and, frankly confessing the inadequacies, to talk etiologic background as far as modern knowledge will carry one. Such attempts at arrangement and classification should carry one always into the field of medicine and its fundamental sciences rather than into the wilds of the Greek and Latin lexicons. The study of cases of which I shall again speak makes this much easier, more illuminating and more convincing than does the older didacticism of the formal lecture. In an effort to relate the skin to the body as a whole, care must be taken to avoid pseudoscience, or discoursing learnedly on some special detail of blood chemistry when one's conscience tells him that nothing has yet been established in regard to its cutaneous significance. I personally avoid even the controversies of the eczematists and the dermatitisists, the seborrheicists and the pityriasists. I believe that it is much more important for the student to learn, for example, to envisage all inflammatory processes in the skin as having a fundamental group of dermal reaction signs, the language of the skin in all forms of inflammation. I prefer to teach them to look for analyzable groups of predisposing and exciting causes, whether external or internal, rather than to confuse them with a schism in the terminology. I do not feel it necessary or desirable to include laboratory instruction in microscopic changes in the skin in the work of undergraduates. Students who have been well trained in pathologic principles can visualize well, on verbal description, what is going on in the majority of cutaneous lesions. They should, in fact, be obliged to visualize it in terms of their general knowledge and not of any special, pathologic background for the latter plan insularizes the knowledge and pigeon-holes it for the undergraduate. Pathologic conditions of the skin can be woven into the teaching of cutaneous diagnosis, and there is no more occasion for the undergraduate to study it as such than for him to take a special laboratory course in the microscopic changes in the lung before beginning to look at roentgenograms of the chest in roentgenology.

To the teaching of syphilology, as such, the foregoing remarks have equally cogent application. Those who hold the title of professor of syphilology, recently held up to ridicule by Lyman Wilbur, know well

that syphilology must be read as "medicine" or it will not pass. Dermatologists who would be syphilologists need to take to heart in this field a warning not unlike that which MacKee incorporated into the body of his textbook on cutaneous radiology. If a dermatologist's knowledge of syphilology is merely skin keep, if he must call an intern to interpret an aortic murmur or a roentgenologist to show him where the bulge is on the plate, he is a half-hearted syphilologist. If dermatologists object to the reading of papers on syphilis before their societies, and exclude from association with them men who as internists, pediatricians, neurologists and urologists are yet conspicuous and able exponents of modern syphilology, they will, I fear, soon reap the fruit of their self-imposed isolation. I know of only one way for the dermatosyphilologist to remain a syphilologist: by examining patients completely and medically, by reading widely and industriously and by teaching, practicing and maintaining contacts effectively in every corner of the field. In the present state of the organization of special medical societies, I feel that a valuable hold is lost on syphilology when this society does not invite to some form of associate fellowship all who have achieved conspicuously in this field, whether their prefix be dermo, interno, uro or pediatro. Perhaps dermatologists may yet have the opportunity to welcome that rarissima avis, a surgeon-syphilologist, to their midst. The more my experience with dermatosyphilologic teaching grows, the more warmly do I appreciate the contacts which syphilology makes for the dermatologist in the broad field of medicine as a whole. To it I often turn as for relief from the routine of daily work and from that skin-myopia which the pressure of dermatologic private practice too often develops.

I have said so many times that syphilology should be taught as a unit, even though its practice is scattered all over medicine, that I fear the repetition will be wearisome. It is possible for one man to grasp the fundamentals of every aspect of the subject and to make a constructive, comprehendible whole of its teaching. Whether or not that man will also be the dermatologist of the medical faculty depends on whether he is a medically and syphilologically minded dermatologist. No more direct challenge to dermatologists' claims in this field exists, and none deserves more effort in response; for syphilology, as I have intimated, challenges them, as medical men, rather than as specialists, and stimulates them to import into dermatology, as well, the breadth that must be theirs as successful syphilologists. The dermatologist who cannot teach syphilology as medicine will either become the head of a mere shot-giving department of intravenous injections, if his faculty support holds, or be displaced by a syphilologist with some other prefix, who can take a broader point of view.

Teaching syphilology medically and as a unit demands, of course, access to all phases of the subject in the form of teaching material.

The best way for a medical school and hospital to collect this material is to center the treatment of syphilis, though not necessarily its diagnosis, in a single department. For the encouragement of those struggling departments that are endeavoring to teach a broad syphilology with a narrow range of material, due either to special conditions of practice or to lack of cooperation from other departments which do not agree with the idea of centralized syphilologic treatment or unit teaching, I can say this: If there are no more than fifty patients with syphilis at various stages in a clinic, and if its staff will practice modern methods of syphilology in treating them, they will present, or develop under observation sooner or later, every significant teaching problem of the disease. The head of the clinic who is a competent syphilologist and who has even a

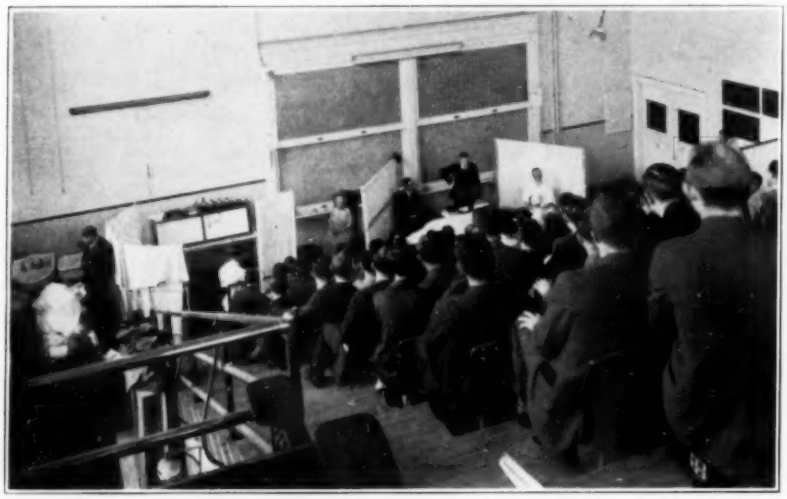

Fig. 2.—Presentation of the work-up of the case by the student examiner and his consultant. The patient is on a stretcher before the class. Every student has examined the patient at close range.

toe-hold on the situation cannot fail to develop an effective teaching clinic if he will but fully utilize even the small amount of material at his disposal. One chancre a year, half a dozen patients with secondary lesions, one case of asymptomatic neurosyphilis, one case of aortic syphilis, a case of syphilis of the liver, a late cutaneous syphilid or two, a case of syphilis of the bones and a patient with late diffuse neurosyphilis can be sufficient, under ingenious and intensive utilization, for the teaching of the fundamental problems of syphilology to undergraduates. They cannot, of course, be made the basis for wholesale statistical study or the development of experts, but that, again, is not the business of undergraduate teaching.

DERMATOSYPHILOLOGY FOR THE PRACTITIONER

The wide range of dermatology and syphilology compels some selection of the material to be presented to undergraduates and some attempt to define the range within which the practitioner shall deal with these phases of medicine to the advantage of his patients and himself. The actual survival of the specialist is also involved, and the power and duty of the teacher to determine a harmonious allotment of the field between the two.

First of all, how much dermatology and syphilology, especially as regards therapeusis, can the medical undergraduate absorb within, say, the maximum of from sixty to eighty curricular hours? From my personal experience, I feel that the undergraduate has a much higher absorptive capacity than many believe. When the work is properly correlated with his medical background and interdigitated with the association trains of his everyday thinking, I have been really astonished to see what he could master and utilize. His range in syphilology will, of course, tend to be greater than that in dermatology, but even in the latter he can be taught enough about diagnosis and general therapeutics to keep 50 per cent of the usual number of patients of the average dermatologist from ever consulting him. Although he will be obliged to use the older methods because of lack of special equipment, he will get reasonably good results so cheaply and easily in many of his cases that his patients will not seek a specialist, believing that the latter has nothing better to offer at the price. The American public, and especially the eastern public, is not sufficiently educated to the superiority of expert attention in ordinary dermatoses to seek specialists rather than the reasonably competent practitioner. It may be asserted that the practitioner gets this degree of special knowledge at the expense of his general medicine or that he cannot retain sufficient therapeutic detail to maintain himself against competition. My reply to this is that, as elsewhere in medicine, a few comparatively simple principles and methods have a high average efficiency, and that, by the end of a year, these can easily be so ingrained into the knowledge of the moderately intelligent student that successful treatment can be administered in the average case of dermatitis, seborrhea, parasitism, psoriasis, epidermophytosis and pyogenic infection. Syphilitic patients go to him already, and with the simplification of methods of treatment which is taking place in erythematous lupus, for example, and his own purchase of a quartz lamp and a fulgurator, he becomes the dermatologist of his community over night. Certainly, only choice need restrain him from making life hard for alleged dermatologists of less than consultant caliber. His ministrations may not be the best available, but they are cheap and accessible, and the average public seeks him without too critical inquiry.

If it is possible, thus, to make fairly useful dermatologists of the undergraduate students, ought this be done? Apply again the touchstone—what is best for the patient? After seeing the problem under various conditions, it seems to me that it is best for the patient that the field be partitioned. In dermatology, the undergraduate should be taught to deal with that median zone of diagnosis and first trial treatment which lies midway between the conditions that require, for their best management, on the one hand, highly special apparatus and laboratory facilities, and, on the other, exceptional medical insight. To the former group in which special equipment is required, belong, for example, the acnes, ringworm of the scalp, the anal and vulvar pruritides and epithelioma. The field is wide and growing, for the more one uses special apparatus, the more one appreciates how it simplifies the problem of treatment and helps the patient to cleaner and quicker results, provided it does not cost him too much. One may therefore find oneself teaching the undergraduate less and less dermatology, because it requires more and more special apparatus for its best handling. To the dermatology of exceptional medical insight belong such conditions as the neurogenous and allergic eczemas, the rosaceas, the generalized pruritides, the involution dermatoses and the hospital group of generalized bullous and exfoliative conditions. To the specialist will always belong the difficult diagnostic problems and the granulomas, exclusive of syphilis. With the well trained practitioner will tend to remain the patients with acute dermatitides, occupational and infectious conditions in the large sense, toxic erythemas and those dermatoses in which the specialist has little more to offer than the family doctor—chronic psoriasis, verruca, molluscum, keratoses and pre-epithelioma. The balance between the two sides of this division varies from community to community and in different parts of the country. As practitioners purchase quartz lamps, and systemic or simplified medication, including chemotherapy, takes the place of manipulative dermatologic skill, as in erythematous lupus, more and more of the practice of dermatology, granted the ability of the practitioner to diagnose correctly, will tend to pass from the specialist back to the well equipped practitioner.

The practical significance of such a partition for the future of dermatology is not far to seek, for dermatology in this country is passing from the era of a thin to that of a thickly populated specialty. Its manifest attractions are apparent even without the help of the medical funny man. Through the marble porticos of prolonged special training here and abroad; through the windows, front and second floor, of general practice; through the coal chute of clinic visiting; through the back fence knot hole of the crasher of society meetings, specialists, and men calling themselves specialists, are oozing into the mansion of dermatology at a rate undreamed of fifteen years ago. The well taught medical under-

graduate and the poorly trained dermatologist will soon be at death grips. The only offsetting influence is that of a public tending to seek special service direct instead of through the practitioner. The teacher of undergraduates is to some extent the arbiter of this issue in the interest of the patient. He can let loose on the twilight dermatologist the destructive competition of general practitioners who do not need a consultant to distinguish for them between pityriasis rosea and a secondary syphilid, or a dermatologist to tell them how to manage successfully alopecia areata, the average epidermophytosis or infantile eczema. He can determine to some extent from the backfield, what specialists are much too slowly trying to determine from the front—who shall qualify to call himself a specialist, and who shall not. The teacher can determine to some extent the degree to which the public will need and seek specialists, by his training of the practitioner.

With such a partition of the field as I have suggested, the genuine expert and the competent practitioner can survive, to the advantage of the patient, with whom their duty lies. The teachers can see to it that the patient with acute and infectious conditions receives the care of a man who has learned real, if limited, dermatology in his undergraduate course, and not one who ascribes an outbreak of scabies in his town to a carload of spoiled milk chocolate. It behooves dermatologists, furthermore, to see to it that, for the difficult problems and the special manipulations, the patient is cared for by genuine and not self-styled experts and poachers from other medical fields, whose blunders discredit a genuinely scientific and medically cultured specialty. I am sure it appeals to you as a duty of this association to give thought to this latter aspect of the problem.

For the undergraduate, then, let there be systematic drill in the diagnosis of the acute and the infectious dermatologic conditions—the acute dermatitides, the pyogenic dermatoses, toxic and drug eruptions, animal parasites, acute exanthemas, the commoner mycoses, syphilis and tuberculosis. Moreover, whenever a cutaneous landmark points toward a significant medical condition the undergraduate should be thoroughly initiated. He should know the meaning of scars, the objective differentiation of ulcers, the analysis of itching and the interpretation of a generalized dermatitis or a pigmentary syndrome. In treatment, the undergraduate should be taught to deal as first-aid with the common diseases, but he should not be given the impression that because an ailment is common, he necessarily knows as much about it as the specialist. He should be taught only a first trial treatment method for a number of conditions, and if it fails, he should seek advice. He should see the results of superior treatment when the dermatologist can offer it, and learn to refer his patient early and of his own volition to the specialist, if he knows he cannot closely approximate the specialist's result. He

should be taught preventive dermatology—the balancing of the atrocious American diet, high in carbohydrates, the control of the furuncular siege, the early and complete destruction of the keratosis and the nevus, the dangers of leukoplakia, so that he may put cutaneous malignancy among the all but extinct rarities. There is as little justification for teaching the undergraduate the intricacies of local therapy as there is for teaching him cutaneous radiology. But the colloid bath, the wet dressing and some simple principles about ointments and lotions can and should be taught, to fit him for his duties as the first line of defense of the "skin-sick" patient.

Similar principles apply to the teaching of syphilology. Syphilology is much less generally accepted as a specialty than dermatology; yet many of its aspects call for diagnostic skill and therapeutic judgment quite the equal of anything in pulmonary tuberculosis, which is readily recognized as a field of special accomplishment in medicine. I believe there will develop, in time, a specialty of consultant syphilology, diagnostic and therapeutic, and I believe that teachers can do much to further it. The spinal puncture alone is made unpopular by the hideous travesty on technical manipulation for which the intern and untrained practitioner are responsible. It could be popularized to the necessary degree for diagnosis if it could be generally performed by men with sufficient experience to obtain at least more spinal fluid than blood when the puncture is performed. In syphilology more than in dermatology, the general practitioner is on the firing line. He need only know the technic of using the needle efficiently to carry out the orders of a consultant, and this he can and should be taught as an undergraduate. He is and always will be the first line of defense against the disease until specialism completely replaces general medicine everywhere and at all times. He has in his hands the famous "golden opportunity" of early treatment, and he must utilize it to the full. Teach the undergraduate proficiency in early diagnosis of early syphilis, chancre and secondary lesions. Make him proficient in intensive general treatment. Give him suspiciousness of mind in ferreting out late syphilis. Teach him to use results from the ordinary diagnostic tests even though he does not perform them. The competent practitioner of everyday syphilology must be a performer more than interpreter, but he must have, none the less, a broad conception of the disease, and a preventive rather than a merely therapeutic and symptomatic outlook. For complex decisions, involving the expert appraisal of the condition of the patient, the coordination of many observations into a diagnostic and therapeutic decision and the management of the therapeutically intolerant, he should be taught to seek consultant advice if obtainable, as much as for the performance of special manipulations, such as intraspinal therapy or pyrexial treatment. Even the examination of the spinal fluid, as I have said, is today so

completely substandard in its performance and interpretation by practitioners that it is a question whether it should not long remain a legitimate part of the special manipulative phase of the practice of syphilology by experts.

Teach the medical student, then, that there is a special as well as a general syphilology; that he is on the firing line of general syphilology and that it is not beneath his dignity to seek and take orders from consultant coordinators more familiar with the disease as a whole than he. Teach him to know and watch his enemy and identify his movements. Teach him to be the rifleman of treatment, to deliver his slugs accurately, repeatedly and on time to the center of his target. But let his range and type of ammunition be determined outside the immediate exigencies of battle, by his consultant, and let him depend more on that consultant for the application of changing and enlarging knowledge to the needs of the particular case.

TEACHING METHODS AND TECHNIC IN DERMATOLOGY AND SYPHILOLOGY

The attempt to put the foregoing principles into practice leaves one with altered and somewhat unconventional conceptions of the mechanism of teaching in this field. I should name the first step in effective dermatologic teaching as increased emphasis on the physical diagnosis of dermatologic lesions rather than the mere demonstration of eruptions. From the late Frederick G. Harris, I learned the diagnostic importance of skill in the identification of the elementary lesion and its evolutionary changes. I have never found a substitute for this element in teaching technic. The field of physical diagnosis in dermatology seems to me still far from developed, or at least far from being formulated in accessible terms. The expert becomes too soon an intuitive diagnostician leaving the student who sits under him to wonder blankly how the diagnosis is reached. No worse mistake can be made in teaching the novice than to give him the impression that argument from analogy and inference from similarity of general visual impression are the methods of dermatologic diagnosis. He must realize and learn to imitate the detailed analysis of visual characters, distribution, and evolution cycle, and to initiate the process of differential reasoning by which the expert reached his diagnosis before he became an "old hand." Textbooks of dermatology seem notably weak in portraying this mechanism of differential diagnosis and in discussion of the physical signs and high points on which an opinion is usually based.

A minimum factual statement or foundation, which must be all but learned by rote, is a necessity and a time saver in the early weeks of teaching. But I do not believe that such matter need be presented in time taken from the clinic. It should be formulated in writing, not

delivered in lectures, and can, at least in my experience, be reduced to 100 pages of double spaced typewriting, in contrast with the 1,000 to 1,500 printed pages that make up the usual inclusive dermatologic textbook. Do not misunderstand me to mean a compend, for the material of this type of summary should largely concern diagnostic principles, not mere condensed verbal descriptions of diseases. With even the present crude outline of this type as a guide to physical diagnosis, the student soon learns from its aphoristic phraseology and 1-2-3-4 arrangement to think for himself dermatologically. In it is given a simplified dermatologic pharmacopeia, differential lists, first trial methods of treatment and etiologic principles—no pictures, for the pictures thus far have been furnished by the patient in the amphitheater. Such an outline resembles a laboratory manual, and does not take the place of a textbook, if one is desired, any more than it substitutes for the actual observation of patients. I do believe, however, that in the place which dermatology is likely to be granted when pure specialism is eliminated from the curriculum of the medical undergraduate, such an outline of principles can be better suited to the medical student's needs and purse and to those of the practitioner than is either the American textbook of today or the compend.

As a teaching implement the present form of textbook is, to my mind, one of the weak rather than the strong points of the present dermatologic equipment, so far as the undergraduate is concerned. I concede its value as a lexicon and a reference book, but I protest that diagnosis, at least, cannot be learned from it in its present state of prolix overdescriptiveness, and that it is too bound up in tradition as to nomenclature and too scantily supplied with medical contact-making points to serve as the basis for the kind of undergraduate work in dermatology that I have described. No American author that I know has yet, for example, had the courage to attempt a systematization in the textbook of the existing material with reference to erythemas, tuberculids and "septids," and lupus erythematosus.

Continuing, with apologies, my unpleasantly iconoclastic remarks, I would say that the illustrations, too, share with most lantern slides the defect of being the product of a specialist's and collector's rather than of a teacher's point of view. They seem too often to be pictures of wallpaper patterns rather than instruments of instruction in diagnosis. The value of a photograph or a lantern slide as teaching material is proportional to three things. The first is a selection of the subject and planning of the picture as part of a teaching scheme, to illustrate a specific fact or principle, or to parallel one condition with another of differential importance. The second is the intimacy of the connection which exists in the examiner's mind between the slide and an actual patient whose history illustrates a diagnostic problem. It is the lack of this vivifying

influence that makes even a good lecturer's presentation of borrowed slides flat and colorless. He is merely showing pictures, not discussing cases. The final item in teaching usefulness is the excellence of the photography, in which I am sure even the most critical will concede that dermatologists like Wende, Fordyce, MacKee and Fox stand second to none in the world. Summaries of important facts in properly chosen type, lantern slides which show in parallel columns two differentiable conditions and the made-up or planned picture illustrating serial phases of a single lesion or problem deserve more utilization than they have received in modern dermatologic textbooks.

I speak of color photography and colored plates only to deprecate their use. Like the moulage, the colored plate must be superlative to have a teaching value at all proportionate to its expense. The average American drawing in color and its reproduction lack the fundamental requisite of dermatologic picturization, which is line detail. To continue to use such means to sell books to a gullible profession is unworthy of the scientific and teaching traditions of the guild. Many of the supposedly best moulages, if viewed dispassionately, are little better than the poorer colored plates. The colors are inaccurate, the wax work is poorly defined and the attention is more attracted by the mortuary wrappings than by the diagnostic detail of the subject. They fail, moreover, to give any notion of the ensemble of distribution and the general condition of the patient. The money spent on such a collection in purchase and maintenance would be much better used for the purchase of fine photographic lenses and the hiring of really skilled technical assistance for photography. In the attempt to make the art graphic, I should like to plead for recultivation of the lost art of free-hand sketching among those who teach dermatology. The cartoonist's and the sand-artist's power can be utilized to hold an audience more often.

I am constrained to record one more somewhat heretical personal impression and conviction. I do not think a larger allotment of time is needed in the curriculum than many now possess, though I concede the cogency and value of such surveys as those of the two Lanes in bringing about uniformity. I have even thought I could do with less than I have, given an adequate textbook and outline, and the maximum economy and intensity in teaching method and impress. With from sixty to eighty teaching hours available, I would put my major emphasis on the phases of syphilis which I have discussed, for in so doing I would perform my duty as a teacher of medicine by an objective method, and I would cover a wide range of differential dermatology incident to the accurate diagnosis of syphilis. During the past year my colleagues and I have devoted ourselves to a combined course, mixing dermatology and syphilology as the method of teaching and the interrelations of the material required. The course begins with training in the objective

identification of dermatologic lesions. By February, the teaching of formal dermatology is completed, and syphilis becomes the chief interest, with a double allotment of time. I have thought of reversing the order next year, and training the student entirely by means of a patient with syphilis, fully examined and studied. In the last twelve hours of the course I would then try to present, in massive form, clinical summaries, using from six to eight patients at a session, of the chief dermatologic conditions with which the practitioner should be conversant. Such a method requires an abundance and controllability of material which it may not be possible to attain, but which has long been the pride of the school at Vienna. I doubt, however, if the method would have advantages over the one first described, sufficient to compensate for the decreased participation of the student in examination and presentation which it would entail. Be that as it may, I no longer agitate for more hours in which to prove the dignity and worth of my branch of medicine. I am arrogant enough to believe that I can already teach the medical undergraduate enough to put the small caliber dermatologist out of business whenever the protection of the patient from incompetent pseudospecialism demands it.

I have thus far, in my iconoclasm, indulged only in statements of minor heresies. I now venture still farther into the controversial field by saying that I am opposed to the didactic lecture or dissertation either from the rostrum or from the amphitheater floor. Didactic presentation today is for the printed page and the mimeographed sheet. The floor is the place for those inexpressibly valuable nuances of approach and personality, those delicate shadings of judgment, those triumphs of decision and those masteries of the art and science which the authentic leader in a field of medicine, and no one else, can give his eagerly attentive students. My opposition to clinical didactic teaching goes even further, and, adopting the Socratic practice, I would tell the student little or nothing about anything, and lead him instead, by skillful questioning and discussion, to create his own fund of information out of what lies before him for observation, cemented by inductive reasoning based on his own past knowledge, medical and personal. The ablest teachers I have known have been masters of this method. No student, for example, who has had the rudiments of his knowledge of inflammation as a pathologic process and the memories of a personal experience of his own welded together by a skillful quiz master into a rationalization of the treatment of furuncle, ever makes the egregious blunders which are daily committed by practitioners taught under the old didactic system. The quiz approach is hard—hard, but developing—for both student and teacher. Nothing so quickly displays the irrationalities in old notions, nothing compels such thorough up-to-dateness, as this sparring between an alert and irreverent young mind and a more seasoned and fetish wor-

shiping old one. I find it an elixir of youth for myself and a veritable tethelin to stimulate mental growth in my classes. The student's habit of holding his cup under the professorial pump parodies the name and ideals of studentship. The true student is the explorer, the seeker, who, while he appreciates guidance, cannot restrain the impulse to go ahead with or without it. Three groups of medical undergraduates have now sat before me, puzzled and at times discouraged because I would keep telling them so little and asking them so much, but the mental state was short lived. Like his baptism in objectivity, the student who develops self-reliance from it gets to like it, and the level of a class from which only an occasional personality protruded at the outset, seems to rise to that of really extraordinary general performance within a few months. I cannot imagine any other method of teaching that could make possible the really intensive detail in observation, the coordination and the sustained differential acumen which I saw third year medical students display as they took charge of my clinic for me in the later sessions of this past year. To obtain from an average student, as I did the year before, a complete extemporaneous thinking-out of the principle of the therapeutic paradox in treating syphilis of the liver, simply from an elementary quiz of weeks before on the action of arsphenamine and mercury, was one of the surprises of my teaching life. The members of a third year class who began work in October, diagnosed, unaided, the following February, as factitial, self-inflicted and probably due to cauterant applications, a cutaneous condition which had been called Raynaud's disease by an able internist and in which there had been serial amputations of fingers and toes by otherwise competent surgeons during a period of fifteen years. The experience was a stimulating and almost heady encouragement to a pedagogical heretic in a stronghold of didactic learning.

To the quiz method of approach I would add the critical necessity for bringing the student to the examining table and the bedside of a much larger mass of material than is often the custom in undergraduate special teaching. I do not believe that it is wise to rely on the few hours of section work usually granted the specialties, for the student's contact with the dermatologic and syphilologic patient. The amphitheater or lecture hour in my department is converted into section teaching, as well, by conducting it as a dermatologic society meeting. The amphitheater floor is divided into booths. Two students are assigned to each patient as examiner and consultant, completely to work him up from every angle possible in the amphitheater. While these pairs are engaged on their study, one fourth of a class of 125 students is called to the floor and makes the rounds of the cases, taking notes. The remaining three fourths are engaged in a quiz-discussion from the benches by the professor, covering some topic in the day's reading assign-

ment or a hypothetic case in which the progress from symptom to symptom and complication to complication is dictated by the replies of the students who take up the discussion. After a ten-minute period, the section on the floor returns to its seats, and another quarter of the class takes its place among the booths to study the patients. The quiz goes on until all four sections have seen the patients, and all have joined at one time or another in the quiz. Then the examiners and their consultants assume the rostrum and present the observations and differential diagnoses of patients whom every member of the class has seen at close range. Each presentation is topped by the professor's critique and summary. The interest is so far superior to that which my best efforts can arouse unaided, that this technic of teaching has come to stay. It might be improved by a special amphitheater such as that of Bloch in Zürich, where the patient passes before the students between the rows of seats. The description sounds like that of a four ring circus, but it is in reality orderly, and not overtaxing for the teacher with a voice and presence suited to an ordinary rostrum. It is easy to have six or eight patients on the floor, and to present only two or three. As a result of this method of teaching in the past year I was able to show every member of my class nearly 200 patients, with critical discussion and presentation of nearly all of them, exclusive of the section work. Details still require adjustment in my own case, and adaptation of the idea elsewhere must depend to some extent on local conditions, but the method has decided advantages.

The securing of case material for clinical teaching on a large scale such as this is a somewhat special problem, and must be met in the small town medical school by a reservoir of beds for the temporary hospitalization of patients. The patients in my clinic are largely drawn from the outpatient service, in which a personal type of consideration extended to the individual patient creates a willingness on his part to extend this form of cooperation to us. Moreover, a patient in the outpatient service cannot obtain consultation with "the professor" except before a class or conference or in consultation with a staff physician. This rule furnishes the additional leverage necessary to bring good material in sufficient amount to the amphitheater. Considerate handling of the patient before the class is, of course, essential to continued success.

My closing plea is for the full utilization, by teachers of dermatology and syphilology, of an unrivalled opportunity. In whose hands lies the impress which scientific and practical dermatology shall make on the medicine of today and tomorrow, and before what audience is the battle for prestige fought? More than on any others in the field, it rests with the teacher of the undergraduate medical student to determine the worth of dermatology in the world of medicine. He gives the vital first

impressions. In proportion as the professor teaches and practices before his students an outworn classicism, an esoteric and remote specialism, a perplexing, isolated and bizarre therapeusis, he makes on them the impress of the crank in his corner, mumbling and fumbling with the dust. As dermatologists unite with the broad advance of medical culture and find, in teaching it, a stimulus to growth rather than a sacrifice to necessary drudgery, they reap prestige. In proportion as the student's mind is sharpened and piqued by contact with the fascinating medical angles of the specialty and the stimulation of the objective approach, his admiration and respect is won. The teacher will not need any bonus of added teaching hours to give him standing. His name shall be called Wonderful, Counsellor! Disciples will flock to him; his electives will be crowded; his graduate courses filled. In contemplation of that prospective rich reward, you of the Elder Statesmen will, perhaps, forgive even the bumptiousness of a three years' professor, who, with the rash enthusiasm of inexperience, has presumed to tell you how he thinks we should present ourselves and our metier before our most uncompromising judge—the medical undergraduate.

ABSTRACT OF DISCUSSION

OF PAPERS BY DRS. WILE, COLE AND STOKES

DR. WILLIAM ALLEN PUSEY, Chicago: The first remark I would make about any discussion on medical education is that we teachers take our subjects too seriously. The next is that there is nothing easier to give than counsel concerning perfection, and nothing more unpractical in results. It is inevitable that each of us should fail to see himself in perfect perspective. We inevitably overestimate the importance of our subjects and what we have a right to expect of students in special subjects.

In dermatology and other specialties, it is necessary to bear these things in mind in order that we hold ourselves in hand in the balancing of general education.

Concerning the educational background, I shall say practically nothing. That is such a large problem and so complex and one about which there is such a difference of opinion that it is impossible to discuss it in a limited time.

The making of a successful physician depends on three things: first a general education comparable to what society expects and accepts as necessary for the beginning of any cultural career, that is, a high school and a special medical education; second, intelligence; and, third, an opportunity for an apprenticeship in one's own line of work. One of the great mistakes we make about special education is that of confusing education with intelligence. They are not the same things. A person can be well educated in the sense that he has a large amount of knowledge and still be useless. I have not much anxiety about the sort of dermatologists we will produce if we get the right kind of men, give them the ordinary amount of general education that society accepts, and then give them an opportunity to practice. It is futile to produce an artizan, a piano player or a syphilologist or dermatologist without giving him an opportunity to practice.

I listened to Dr. Stokes' paper with great interest. I do not find that I differ from him to any great extent and accept, so far as I do any one's creed, the creed he has enunciated. I am willing to accept that we have been and are teaching dermatology wrong to undergraduates. I agree that a

textbook consisting of a thousand pages for an undergraduate should be replaced by a short orientation for students, and I urge Dr. Stokes to produce the perfect essentials of dermatology that the whole world needs. It would be a great service and a difficult one. One must have a great knowledge of dermatology and a knack for teaching. I was delighted to hear Stokes say that he did not wish more time for his courses; that is an exceedingly important matter. I have been on two dermatologic committees, working over dermatologic education. We have not had any trouble in getting the amount of time that some of us who tried to be reasonable thought was necessary. I think I can claim to be responsible for the ninety hours that was allowed dermatology in the pattern course that was gotten out twenty years ago. I am anxious to have dermatology kept in the undergraduate course, but in order to do so we must teach it in a small amount of time. The span of life is only seventy years, and we have to teach specialties in a short time. I am convinced that a man can be taught the essentials and fundamentals of dermatology in a reasonably short time, and I believe that this must be worked out, unless dermatology and the other specialties are to be eliminated from the undergraduate course. As you know, I am as much of a heretic regarding medical education in general as is Dr. Stokes concerning dermatology. You know it is and has been suggested that all the specialties be eliminated from undergraduate education. I think that is wrong, but we must teach them in a limited time if they are to be retained.

I would point out that there are two standpoints from which we should consider that problem, and that is where I think counsels of perfection are likely to lead us into trouble. No one sees with greater joy than I the leaders among the young men coming into the Association from year to year; they are a special product. We must also have the everyday, less brilliant work of taking care of the everyday sick, and I think that is the limit in general medical education at which we should aim. The aim should be to train well grounded practitioners. For the man who aspires to specialism, I do not care how much training it takes. There is nothing more satisfactory than to have as comprehensive and complete a training as possable in one's specialty, but there is such a thing as teaching one to the point where one gets to be nothing but a sort of receptacle. The man who takes from ten to twelve years of training, as many rich young men do, is often stale when he has completed his course. This applies also to what Dr. Stokes calls so kindly the "older statesmen." I find that if I do not mingle with the bumptious young practitioners that I get stale.

For the specialist's training in dermatology, I would make a minimum of two years. I was on the committee and presented the report to which Dr. Cole referred. We made it two years intentionally because we felt that in that time a man can be soundly trained in dermatology to the point where he can practice safely on his own account; then, if he cannot develop himself, he is hopeless from the start. I am sure that sort of training can be obtained in two years after he has had his other work and hospital course, provided the time is spent in an intelligent apprenticeship. I do not care how it is spent, if it is spent under one who is as nearly a master as the student can find. As Benjamin Franklin said, "If you wish to learn a trade, apprentice yourself to a master." I do not care whether the training is had at the Massachusetts General Hospital, at Johns Hopkins, at the Mayo Clinic or with some first class dermatologist who has the material to use.

I think the wise course for us to pursue is not to lay down any pattern, but to grasp these essential facts, hold to practical standards and stand by them, and let the rest take care of itself.

Dr. Oliver S. Ormbsy, Chicago: Four years ago this was the subject of my presidential address before this Association, so I have had it in mind.

I agree with Dr. Stokes that the medical student should be taught merely the principles and essentials of dermatology that will be of value to him as a general practitioner. The idea of making a specialist of him is out of the

question. I am much impressed by Dr. Stokes' presentation and shall be interested in seeing the results of his method.

In his presentation, Dr. Cole spoke of having examining boards for specialists in dermatology. I brought up this question four years ago. It is a matter that will have to be considered, and I believe the time is coming when this Association will have to consider it seriously. The Otolaryngological Association has, during the past few years, established such a board, and the ophthalmologists have had one for several years; both are extremely successful. As I previously stated, such examining boards are more than necessary in ophthalmology and in otolarynology than in dermatology on account of the much greater number of men desiring to enter these specialties. Four years ago, there were approximately 250 men in the United States working as dermatologists; more than 500 ophthalmologists have been licensed by the examining boards. There is some question as to whether we really need an examining board, but this Association will have to take that up sooner or later, and it should be done in connection with the Section on Dermatology of the American Medical Association.

As to training specialists in the time allowed, I agree with Dr. Pusey, but I feel that if we could keep the men for three years it would be better. We offer scholarships for from one to three years at Rush Medical College for training these men. Most of them remain two years, some only one. One year in an assistant position is rather short, so two should be the minimum. These men are not given any lectures, but get their training by acting as assistants. The few who have finished such training have demonstrated that it is satisfactory. Of course, we all believe that a thorough preliminary training enhances a man's chance for success. I believe that the principles laid down by the committee of which Dr. Pusey was chairman and Dr. Cole and I were members fulfil the requirements, and if we carry out those principles we will have a satisfactory group of dermatologists in this country.

Dr. George Henry Fox, New York: I am an out of date teacher of dermatology, but I agree with what has been said, namely, that the chief function of the teacher is not to teach dermatology, but to teach the student how to learn dermatology from the little the teacher may be able to tell him and from the few cases he may see in a clinic, and how to use his ideas and his wit in adding to his knowledge whenever he observes a case of skin disease. It is mainly a question of teaching a student to observe. The greatest dermatologist I ever knew was Hebra, and he could tell more by a glance at a patient than any of his students could see or learn from a long catechism. He taught his pupils never to ask whether an eruption itched or not, but merely to look at the skin and see if the patient had scratched it. He believed in teaching the student to observe carefully, to see everything that could be seen, and in that way to learn to be a dermatologist.

Dr. Charles M. Williams, New York: There is so much to talk about that the only problem is to select some of the subjects. First, there is the question of the study of French and German in the preliminary education. It is not necessary for the medical student, or for routine practice that these languages be studied, but it is necessary for the man who is going to keep abreast of the times to know what is going on. The thing is to find time for this work. At Bryn Mawr college every student must know enough about French and German to be able to read at sight and get the gist of a page of easy text, and with all the dictionaries and help she wishes, to be able to translate a paragraph of French and German and give the exact meaning. The college does not give any of this work; it is learned outside of the school in addition to the heavy courses given. If this can be done at a woman's college, I do not see why it cannot be done at a man's college.

I am greatly interested in Dr. Stokes' counsels of perfection. I wish I could follow them, but I cannot, partly because I have not the opportunity, and partly because I have not his infinite capacity for taking pains. I was delighted to hear his remarks about external examination and the elaboration of that

point by the men who have discussed it. To me it is absolutely essential to teach the student to look, to come to a conclusion concerning what he sees and then to be able to express this in words. He may look over a patient and think he has seen everything, but unless he can tell what he has seen, he does not know. The exact use of words is one of the fundamental necessities, and every student should be made to describe a condition in such a way that others will know what he is talking about.

Another thing is to distinguish what one sees from the conclusions drawn from observations. This is extremely important, but many students in all walks of life have never been able to differentiate what they have seen from their interpretation thereof. An example will make my meaning clear. A woman came to the clinic with a lesion below the angle of the mouth. I asked a student what he saw. He said, "a blister." There was no blister there, but a moist lesion. The student said that there must have been a blister last week to produce what he saw. What the woman had was an ulcerating epithelioma, and not a bullous lesion.

Of course, the textbook consisting of a thousand pages is useless to the undergraduate, and I wish that some short textbook was available. The present form is for a reference book. I would like to see a textbook for the undergraduate in which the instruction is limited to the primary lesion and its evolution, with the description of the few diseases for which he may be expected to treat the patient intelligently. The student must recognize his limitations. He must realize when he does not know. He may recognize scabies, psoriasis and some of the simple infections, but he must know that when he sees other conditions he should turn the patient over to someone else who has a wider knowledge.

Dr. Howard Fox, New York: In discussing the educational background, I would say that it is necessary to learn to speak and write English well. We all know how many medical papers are poorly written. It seems to me that a little Latin and Greek in the preliminary education would be invaluable in learning the derivation of words and would help to avoid some of the otherwise frequent mistakes in terminology. I am in favor of cutting out some of the higher mathematics and substituting French and German. It is not necessary to learn to speak them fluently, as that requires a special aptitude, but one should be able to read without difficulty. Biology, chemistry, physics and botany should be studied by all premedical students.

In reference to Dr. Cole's paper, I think that a year or eighteen months at most is enough for a hospital internship. The student's time is limited, as Dr. Pusey said. As we all know, it is no longer necessary for the student to go abroad to become a dermatologist. The minimum of time that should he devoted to graduate work in preparation for practice as a dermatologist is two years.

I agree with Dr. Stokes that didactic lectures are not the best for teaching undergraduate students. Instruction in small sections is much more valuable than the didactic lectures. Dr. Stokes' method is extremely interesting, and I hope to make a little pilgrimage in the fall and see his technic. The impression of dermatology and syphilology obtained by the student of the present day is different from that of a decade or two ago. Dermatology was formerly hardly more than a collection of names. It is now a dignified and highly diversified specialty and cannot be considered the stepchild of medicine.

Dr. Walter J. Highman, New York: Dr. Stokes thoroughly echoed everything I believe. I think what Dr. Stokes means is that the aim of the training of any dermatologist in a medical school should be to train him to think for himself. I believe that if he fails to do that the fault lies less with medical pedagogy than with early training, as Dr. Wile pointed out. It is not a matter of whether he learns to speak German or French, but whether he can read and understand them. It is obvious that the cultured man should have a knowledge of modern languages, and the knowledge he needs is easy to

acquire. This is not a part of graduate medical teaching but of premedical training. I think that the study of biology, chemistry and physics is not enough for the early training of physicians. To present these sciences in the arbitrary and stupid way in which we learned them in college does not serve the purpose. I would add logic and philosophy to the curriculum to give the physician those proper habits of thought that are gained by deductive reasoning. This would prepare the medical student to derive the utmost benefit from a training such as Dr. Stokes described. Such early training would result even in better deans—deans capable of logic. It seems to me that the right place to begin the education of medical students is where Dr. Wile has pointed out that it should begin. I wish that we might reflect a little more on the beginning rather than on the end of medical preparation.

Dr. C. Guy Lane, Boston: Dr. MacKee this morning emphasized well the functions of the medical school in reference to the undergraduate teaching, in giving students the fundamentals and in teaching them the common diseases. I also wish to emphasize what he has said in regard to graduate instruction, namely, that proper facilities must be provided for teaching, first, the graduate who has chosen dermatology as a specialty, second, those general practitioners who come back for further instruction, and, third, those who wish to undertake research work in various lines: statistics, clinic, laboratory work, etc. We need, perhaps, a searching analysis of methods and of the points of view of these different persons concerned in order to accomplish proper results, and I think Dr. Stokes has well illustrated the matter of coordination of the medical school and the dermatologic department in arranging a portion of this field.

Dr. Highman, in speaking of the study of pedagogy in medical schools, brings to my mind a young woman I have in my charge who has been taking up psychology and pedagogy as a subject for her thesis. Would such a point of view help? It has made me wonder whether a statement of our case to a pedagogic expert or some department of education would lead to any worthwhile contribution on the subject of dermatologic teaching. If, for example, we supplied information on the type of person we are trying to teach, his previous training, the amount of time allowed, etc., together with a short explanation of what we hope to teach, could we obtain perhaps a theoretical statement as to the proper educational theories for putting this matter before the student, and could we out of these theories take some practical part in the training of these medical students in dermatology?

I think Dr. Cole has done well to emphasize the standards of fitness which specialists in diseases of the eye are using in their particular work. It seems to me that it would be possible for our Association to apply something along that line to our particular specialty.

Dr. James Herbert Mitchell, Chicago: I lived in a university atmosphere for many years and had the opportunity to watch the development of the application of modern business efficiency to methods of teaching. A teacher is born, not made, and I think after all it is the personality of the individual that counts. I remember hearing Dr. Carlson, who is one of the best teachers I have ever met, say that a good school could not make a poor student a good one, or vice versa. I think we are attaching to much importance to the efficiency of teaching. The ideas expressed by Dr. Stokes are excellent, but another teacher might not be able to accomplish anything with his complicated method.

Dr. Fred D. Weidman, Philadelphia: Dr. Lane has hit the nail on the head in saying that the established principles of pedagogy apply also to our dermatologic educational problem. In a discussion of this sort one can touch only on one or two of the phases involved, but in any constructive program these principles should be mapped out and any further procedures based on them. One of the particular items that I will touch on is the time allocated in the curriculum. Dermatologists though we are, we must recognize that dermatology is not a major subject and that we must cut our cloth according to the time

available. We should not, however, overstep certain proprieties. Thus, a statement appeared recently in connection with the program of the American Medical Association on medical education about good faith between heads of departments thus, certain heads are addicted to bulldozing students for the purpose of securing additional attention to their particular subjects. The result is that other, more conscientious departments, become neglected.

The second point that I would bring out is the approach to the study of dermatology and its connection with internal medicine. All of us have had the latter thoroughly drilled into us; it is one of the high notes continually being struck, and "cutaneous medicine" is often urged as a designation to supplant dermatology. To this end, I believe that one of our first duties in opening up a dermatologic course is to make the proper impression on the student. As I recall my own student experiences, the impression was anything but favorable, in common with other specialties, because the student is at once plunged into a foreign element. He has just completed his second year of physiology, bacteriology and pathology, and without reference to previous instruction is at once plunged into new clinical methods. The remedy for this lies in adherence to pedagogic principles, one of which is to utilize the known in leading up to the unknown. In the practical application I would employ the first two or three lectures to a consideration of the second year subjects as they affect or are modified by a connection with the skin. After that, the understanding of such changes as scaling, formation of wheals and other symptoms would be understood by the student because he could correlate them with his physiology and pathology, or even reason out the etiology in a given dermatosis through the medium of physiologic and pathologic changes induced. This is much better than learning dermatology through sheer memory work. The same plan could be followed with advantage in the arrangement of modern textbooks on dermatology. At present none of them does this, and until that time I feel that dermatologic teaching cannot be properly carried out without didactic lectures.

Another subject I wish to touch on is the teaching of microscopic work in the undergraduate course. Such a course need not be lengthy, but I do not think that it should be entirely omitted. Perhaps from two to four hours would be ample. Thus, it would be improper, in teaching a student general medicine, to give him a slide from a case of nephritis and expect him thereby also to recognize cirrhosis of the liver. I do not believe that the student can understand properly what is responsible for the varying changes in eczema—what causes induration, papule formation and pustule formation, unless he has seen sections or histologic demonstrations of that condition.

URTICARIA PIGMENTOSA *

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Urticaria pigmentosa is a rare disease; probably less than 350 cases have been reported in the literature. The first case was described by Nettleship [1] in 1869. Since that date, Little,[2] in 1905, has collected reports of 154 cases and Finnerud,[3] reports of 141 cases occurring between the years 1905 and 1923.

CLINICAL FEATURES

The disease usually begins in infancy and frequently disappears at puberty, but it may continue into adult life. Little states that 14 per cent of the cases do not develop until after the patients have reached the age of puberty, while Finnerud's figures show 33.9 per cent of cases of this type. In a few instances, cases have been observed following vaccination and varicella; others have followed a fright (Little). In the majority of cases, especially those developing in infancy, the earliest visible lesions are urticarial. These are soon followed by either macules, nodules or a mixed type of eruption in which both macules and nodules are present. Bullous lesions have been described, but these are exceedingly rare. In the majority of cases occurring in adult life, the lesions develop and persist as small macules. This was the mode of onset in six of our cases. In another case, the majority of lesions were of the papular type. The color is usually reddish brown or walnut, but changes to bright red when the lesion is irritated. This phenomenon is characteristic of the disease. A feature of importance in some cases is the clinical resemblance to syphilis; Adamson [4] mentions the fact that it is often mistaken for that disease. The usual distribution of the lesions is on the trunk and limbs, the palms and soles being spared

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* Presented before the Section on Dermatology and Syphilology of the Medical Society of the State of New York, Niagara Falls, May 11, 1927.

1. Nettleship: Chronic Urticaria, Leaving Brown Stains; Nearly Two Years' Duration, Brit. M. J. **2**:323, 1869.

2. Little, E. G.: A Contribution to the Study of Urticaria Pigmentosa, Brit. J. Dermat. **17**:355, 393, 427, 1925; **18**:16, 1906.

3. Finnerud, C. W.: Urticaria Pigmentosa (nodular type) with a Summary of the Literature, Arch. Dermat. & Syph. **8**:344, 1923.

4. Adamson: Adult Urticaria Pigmentosa, Brit. J. Dermat. **35**:219, 1923.

Statistics reporting lesions on the face differ; Hutchinson [5] and Morrow [6] reported lesions on the face in several cases, while they occurred in only one of ours. We have not observed lesions of the mucous membranes either in infants or in adults.

Urticaria which develops after the patients have reached the age of puberty is frequently designated as a separate or acquired type of the disease, because it is alleged that the lesions are always macular and smaller than those of the infantile type. Pusey,[7] Hannay [8] and others have pointed out, however, that nodular lesions, even of the xanthoma type which occurs in infants, occasionally occur in adults. In sections examined microscopically, we have invariably found the pathologic changes in the tissues of infants and of adults to be essentially the same. We see no reason, therefore, for classifying the lesions separately.

Two of our cases will be reported in detail. The first illustrates the unusual feature of the occurrence of lesions on the face, and also the resemblance to secondary syphilis.

REPORT OF CASES

CASE 1.—A white man, aged 32, had not had any disease of the skin in early infancy, and there was no history of any cutaneous trouble in other members of the family. The present condition of the skin had begun approximately twenty years before. Examination revealed the presence of a widely distributed eruption. The lesions, especially those situated on the trunk, were mostly discrete, millet seed, "ham" colored papules arranged in groups suggestive of a secondary syphiloderm. The lesions on the face were of the macular type and showed definite brownish pigmentation. The scalp, palms and soles were free. The Wassermann reaction of the blood was negative on several examinations, and the blood chemistry was normal.

The case was presented by Dr. Joseph J. Eller at the January, 1927, meeting of the New York Dermatological Society. During the discussion which followed, Dr. George M. MacKee referred to the size, color and grouping of the lesions as strongly suggestive of papular syphilis.

A second case is presented as a typical example of the so-called "acquired" or "adult" type in which the predominant lesion is the macule.

CASE 2.—M. S., a white woman, aged 32, had been married twice. There was no history of any disease of the skin in the family. By her first marriage, the patient bore one normal child at term, and she had had two miscarriages at

5. Hutchinson: Quoted by Finnerud (footnote 3).

6. Morrow: Quoted by Little and Finnerud (footnotes 2 and 3).

7. Pusey, William Allen in discussion of Hartzell: Urticaria Pigmentosa, J. Cutan. Dis. **35**:756, 1917.

8. Hannay, M. G.: Urticaria Pigmentosa in Adults, Brit. J. Dermat. & Syph. **37**:1, 1925.

intervals of three and nine months, respectively, after her normal delivery. She had not been pregnant since her second marriage.

The changes in the skin, which were first observed by the patient two and one-half years before she consulted us, began as dark brown spots on the arms. The eruption gradually spread over the whole cutaneous surface, except the face and neck, which remained free. She sought advice at a local hospital, where the condition was diagnosed as syphilis. A strongly positive Wassermann reaction was obtained. Arsphenamine and mercury given over a period of six months failed to produce the slightest change in the appearance of the lesions. The patient came under the care of one of us (J. F. F.) in July, 1925. When she was examined, there was a widespread eruption composed of irregularly shaped,

Fig. 1.—Urticaria pigmentosa; macular type. The lesions in this case began in infancy and continued into adult life.

rounded and oval, smooth macules having a walnut brown or chocolate au lait color and measuring from 1 to 6 mm. in diameter. The number of the lesions and the intensity of the pigmentation were greatest over the breasts and the inner surfaces of the thighs. Below the level of the knees, the lesions were sparse and ill defined. The face and neck were free. There was a fairly well marked factitious urticaria (a phenomenon observed in all our cases) over areas of apparently normal skin (dermatographism).

MICROSCOPIC CHANGES

Our observations are based on examination of biopsy material from eleven cases, seven of which were of the so-called "adult" type. The

pathologic alterations in the tissues were essentially the same in all and consisted mainly of: (1) pathologic mast cell accumulation in the corium, (2) rarefaction of the collagen bundles with a tendency to fraying and rupture of the elastin and (3) the presence of pigment granules (melanin) in the epidermis and also in deeper areas.

Accumulation of Mast Cells.—The excess of mast cells in the lesions of urticaria pigmentosa was first reported by Unna [9] in 1887, and has since been regarded as a characteristic feature of the disease. Little, in his masterly review of the subject, found only two cases among his collected reports in which this feature was not found. Other observers have reported a much higher percentage of "mast cell free" cases. In Hannay's [8] collection, there were eight such cases in a total of forty-two.

An excess of mast cells was found in all of our cases, although in some cases repeated examinations were necessary to establish this. In one case, the results of microscopic examination of sections from two biopsies performed at intervals of several weeks were negative. Sections from a third biopsy a month later showed the characteristic collections of mast cells. A case reported by Wise [10] as free from mast cells showed mast cells a year later. Hartzell [11] has called attention to the fact that mast cells may be present in one stage of the evolution of the lesion and not in another. Experience has proved the wisdom of not reporting a case as free from mast cells until repeated histologic examinations have been made.

We do not share the view of those who claim that an excess of mast cells is pathognomonic of the disease. Mast cells occur in large numbers in various chronic diseases. In arsenical keratosis, for example, we have observed a cellular collection in the corium which contained as many, if not a greater number of, mast cells than some of our cases of urticaria pigmentosa (fig. 4). Pathologic excess of mast cells is of diagnostic value only when correlated with the clinical picture.

We have not been able to confirm the observation made by Gilchrist [12] that there is an increase in the number of mast cells in lesions which have been the subject of irritation. We did not find any perceptible difference between the number of mast cells in irritated and in non-irritated lesions. Neither do we agree with the statement found in

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9. Unna, P. G.: Beitrage zur anatomie und pathogenese der urticaria simplex und pigmentosa, Dermat. Studien, no. 3, 1887.

10. Wise, Fred, in discussion of Mont: Urticaria Pigmentosa, Arch. Dermatol. & Syph. **14**:721, 1926.

11. Hartzell: Late Urticaria Pigmentosa, or Urticaria Pigmentosa Beginning After Puberty, J. Cutan. Dis. **35**:756, 1917.

12. Gilchrist, T. C.: Two Rare Cases of Diseases of the Skin, Bull. Johns Hopkins Hosp. **7**:138, 1897.

various textbooks that mast cells are present in abnormal numbers in the intervening healthy skin. Repeated examination of sections of skin adjoining the lesions did not reveal the presence of mast cells in excess of normal.

The mast cells in our cases were found chiefly around the base of the papillae and surrounding the blood and lymph capillaries. They were also observed in close relation to the follicles, sebaceous glands and sweat apparatus, and a few were seen lying between the bundles of the coarse collagen layer. Others were seen following the capillaries of the papillae (figs. 2 and 3).

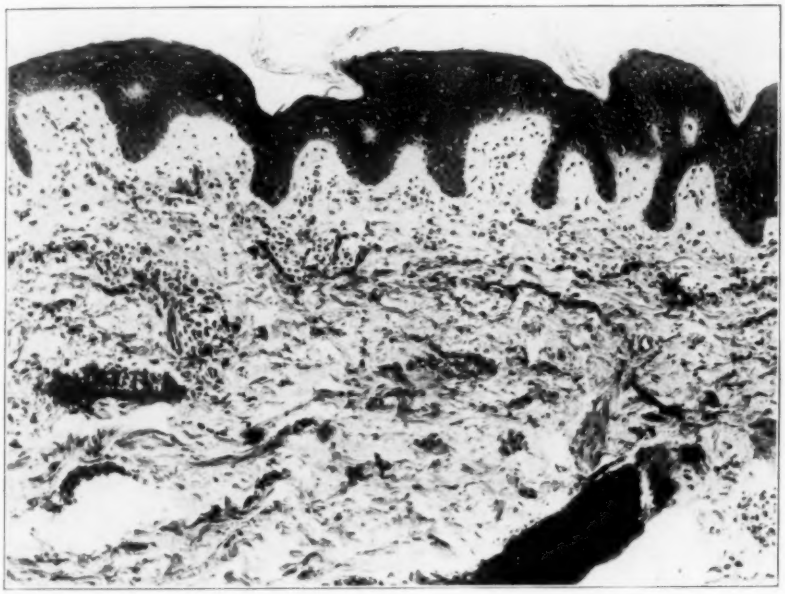

Fig. 2.—Section of skin, macular lesion. Low power magnification, showing distribution of the mast cells.

There are two widely divergent views concerning the origin of these mast cells, viz.:

1. They are derived from the blood and are identical with the mast cells of the blood or basophilic leukocytes.

2. They arise in situ from tissue cells.

Cells with metachromatic basophilic granules are normally found in two locations: in the connective tissues, where they are known as tissue mast cells; and in the blood, where they are called blood mast cells, or basophilic leukocytes. The first step in the problem, therefore, is the identification of the mast cells found in urticaria pigmentosa with one or the other of these normal varieties, if distinguishing features between these types can be shown to exist.

Mast cells have engaged the attention of a number of hematologists, some of whom have regarded the blood and tissue basophils as identical, while others have observed certain differences between them. The latter view seems to have the better support. Maximow [13] has shown that in man and other mammals, the mast cells in the blood and in the tissue have different modes of origin, as well as different morphologic features. Clowes [14] found distinct, though slight, chemical differences in the degree of metachromasia between the granules of the two types.

The mast cells which appear in the lesions of urticaria pigmentosa are of the "tissue mast cell" variety and do not bear any resemblance to the basophils in the blood except in the presence of granules. Their nucleus is single, round or oval, while that of the basophil is polymorphous. The nuclei bear a close resemblance to the nuclei of connective tissue cells and lymphocytes in the immediate vicinity. The origin of these cells is the same as the origin of the mast cells in the tissue under normal conditions.

Maximow,[15] Downey,[16] Ringoen [17] and others have shown that the basophils in the blood arise by differentiation of basophil myelocytes in the bone marrow. These cells sometimes have mitoses. The mast cells in the tissue, on the other hand, probably arise from cells in the connective tissue, or from lymphocytes, by the acquisition of basophilic granules in the cytoplasm. It is noteworthy, in this connection, that mitoses were absent in the mast cells in our cases as in all other cases of urticaria in the literature.[18]

Developmental stages may often be seen more easily in sections in which mast cells are less numerous. Around some of the small vessels are seen collections of connective tissue cells, so-called "histiocytes," "wandering cells" or "periadventitial cells," rather loosely arranged around the vessels. Among them are cells exactly similar in nuclear characteristics, but differing in that they contain basophilic granules in the cytoplasm. The number of granules varies. Those which contain only a few are interpreted as being in an earlier stage of development. The fully formed mast cell is filled with basophilic granules.

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13. Maximow, A.: Untersuchungen über Blut und Bindegewege: VI. Ueber Blutmastzellen, Arch. f. mikr. Anat. **83**:247, 1913.

14. Clowes and Owen: Metachromatism of Mast-Cell Granules and Mucin, J. M. Research **12**:407, 1904.

15. Maximow, A.: Ueber die Zellformen des lockeren Bindegewebes, Arch. f. micr. Anat. **67**:680, 1906.

16. Downey, H.: The Development of Histogenous Mast Cells of Adult Guinea Pig and Cat, and the Structure of the Histogenous Mast Cells of Man, Folia Haemat. **16**:49, 1913.

17. Ringoen, A. R.: The Mast Leucocytes in the Adult Guinea-Pig Under Experimental Conditions, Am. J. Anat. **31**:319, 1923.

18. Note that Maximow (footnote 15) reports mitoses in tissue mast cells.

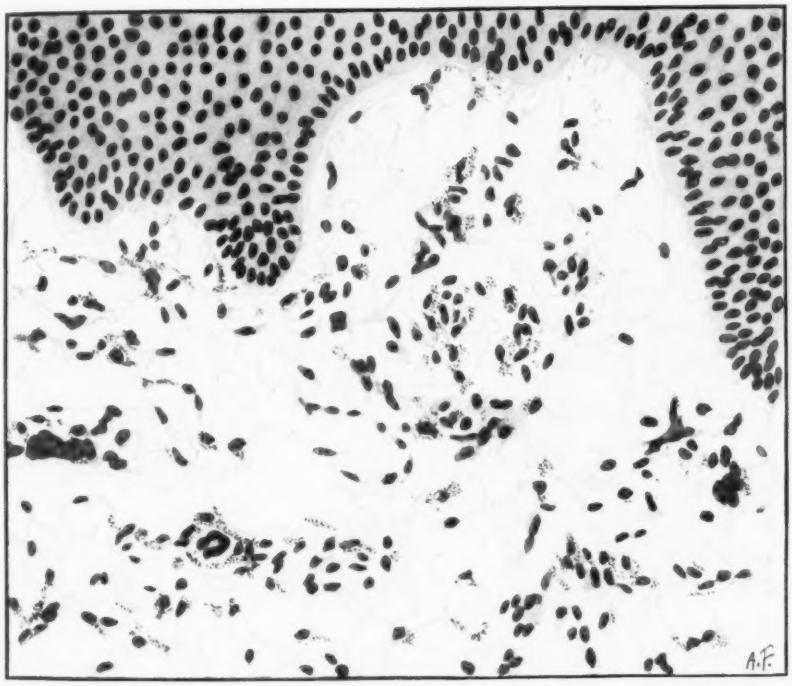

Fig. 3.—Urticaria pigmentosa. High power, magnification, showing excess of mast cells in the corium, toluidin blue stain.

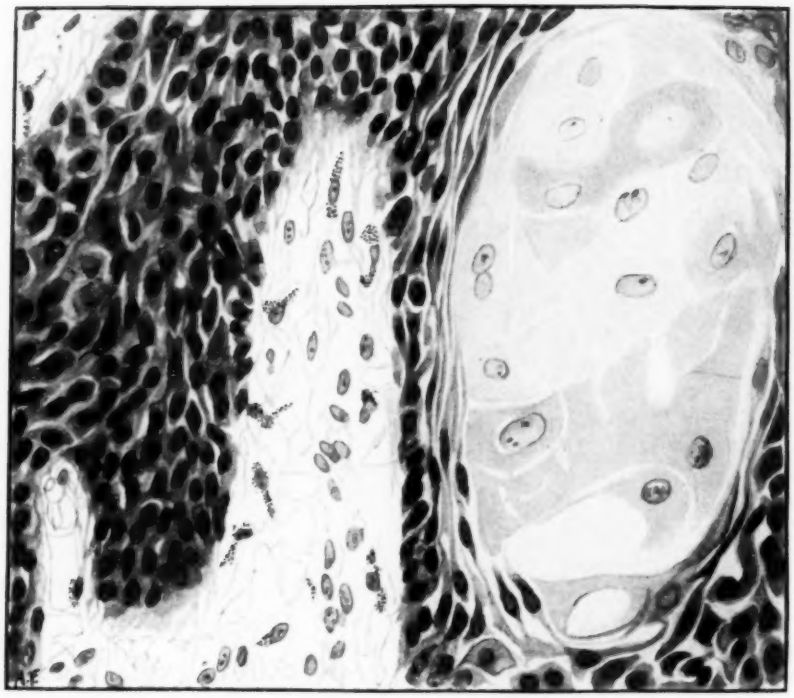

Fig. 4.—Arsenical keratosis. The mast cells are as numerous as in some cases of urticaria pigmentosa. Note anaplastic changes in the epithelium.

The mast cells in urticaria pigmentosa are thus of local origin, and arise by the differentiation of preexisting connective tissue cells or lymphocytes. They do not come from the blood, primarily because they are not blood leukocytes. Moreover, basophils are not present in increased numbers in the blood, nor are they found emigrating from the vessels.

The mast cells in our cases were not cuboidal, but stellate or elongated. Cuboidal mast cells are reported in lesions containing numerous cells in a small area. The cuboidal shape is probably the result of pressure of adjacent cells. How this pressure is produced, however,

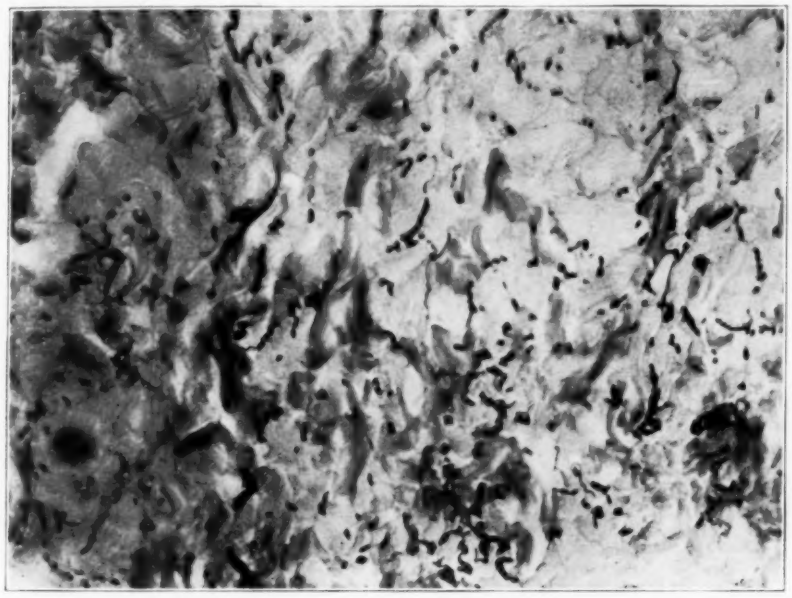

Fig. 5.—Elastic tissue stain. Note thickening and rupture of the elastic fibers.

is not always clear. Brogersma [19] considered that, as the result of rapid edema, mast cells of the skin are brought together in masses by the influx of fluid; however, the edema seen in our sections is hardly enough to account for the influx of cells. It is hard to understand why mast cells should have been especially selected, for lymphocytes and other wandering connective tissue cells probably occur outside of the lesions in numbers as great as the mast cells, but are less conspicuous. Furthermore, edema resulting from the escape of lymph from the vessels could hardly explain the massing of the mast cells in

19. Brogersma: A Case of Urticaria Pigmentosa, Brit. J. Dermat. **11**:179, 1899.

close proximity to the vessels. We therefore consider that the mast cells have not been recently brought in by the sudden edema. Their perivascular situation is due either to chemotactic influences or to the presence in this situation of more favorable environmental conditions for their development.

Changes in Collagen and Elastin.—These changes consist of rarefaction of the collagen bundles and fraying and rupture of the elastin. These changes are well known. They are illustrated in figures 5 and 6.

Pigment.—The nature and distribution of the pigment was studied for us in two cases by Dr. Gilbert Dalldorf. The pigment gave the reactions characteristic of melanin: it bleached quickly with hydrogen

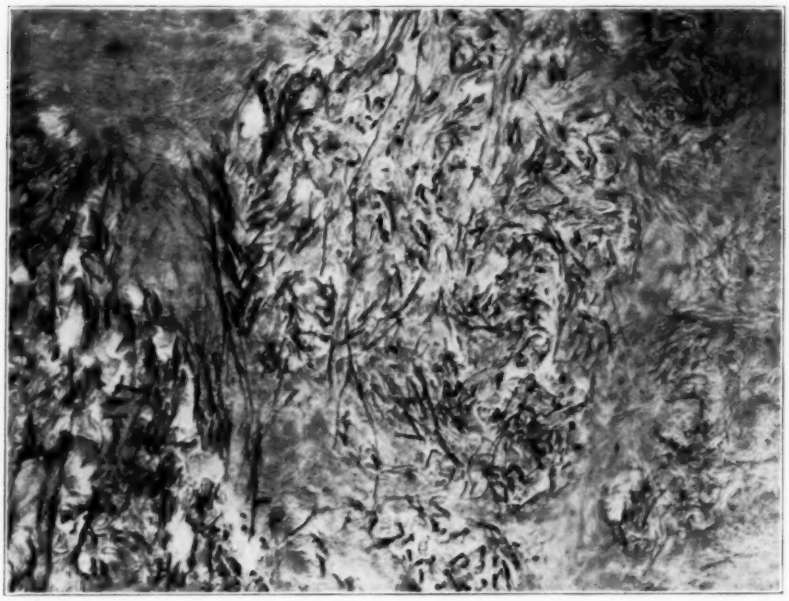

Fig. 6.—Normal skin, elastic tissue stain. Compare with previous figure.

peroxide, it reduced silver nitrate readily; its bleaching time with antiformin was brief. Moreover, it did not give any iron reaction with Mallory's modification of the Turnbull blue reaction, and was negative to both sudan and scarlet red. These observations were in accord with most of the previous work.

Pigment was found in the prickle cell layer and also deeper in the corium. For the study of its distribution, the slides were given one hour preliminary treatment with 2 per cent silver nitrate, at room temperature and in the light. It was only after darkening the pigment with silver nitrate that the extent of its spread and the details of its arrangement were realized. Even the smallest pigment granules are made visible by this method, and pigment deep in the cutis, which is as a rule lighter in color than that of the prickle cell layer, is emphasized.

In the prickle cell layer, the granules of pigment were both intracellular and extracellular. In the deeper layers, they were in perivascular connective tissue cells, together with mast cells. The mast cells, however, did not contain pigment (fig. 7). This probably explains the absence of any relation between the degree of pigmentation and the number of mast cells in the lesions. Our preparations did not enable us definitely to determine whether the pigment in the deeper layers of the skin was of local development, or whether it was a secondary deposit from the more superficial layer of pigment.

TREATMENT

Therapeutic measures are of little or no avail in causing the disappearance of the lesions. Michael [20] has reported favorably on the

Fig. 7.—Urticaria pigmentosa. A blood vessel in the corium, silver nitrate preparation. Melanin granules indicated as dots, mast cell granules as circles. Note that the mast cells contain no melanin.

use of roentgen-ray therapy. We have tried this in only one case, without noticeable results.

CONCLUSIONS

1. The pathologic changes in the tissue in urticaria pigmentosa are essentially the same in both the infantile and the adult types of the disease.

2. In gross appearance, the lesions in some cases of urticaria pigmentosa bear a striking resemblance to the skin lesions of secondary syphilis.

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20. Michael, Jeffrey C.: Urticaria Pigmentosa in Adults Treated by Roentgen Ray, Arch. Derm. & Syph. **9**:746 (June) 1924.

3. Mast cells are present in excess in the majority of cases at some stage of the disease, but may be absent at any individual examination.

4. Repeated histologic examinations are necessary before a case can be reported as "mast cell free."

5. An excess of mast cells is characteristic but not pathognomonic of urticaria pigmentosa.

6. Irritation has no influence on the number of mast cells present either in the lesions or in the surrounding skin.

7. The mast cells are of the "tissue mast cell" variety, and are morphologically and genetically different from the mast cells of the blood.

8. The mast cells arise locally by differentiation of preexisting connective tissue cells or lymphocytes.

9. Melanin is present in excess, both in the epidermis and in the corium.

10. The pigment in the corium is in perivascular connective tissue cells, and represents an abnormal distribution of the pigment.

CERTAIN VOLATILE OILS AND STEAROPTENS AS FUNGICIDES

AN EXPERIMENTAL STUDY *

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At the annual meeting of the American Dermatological Association held in 1924, one of us reported the results of an investigation of an occupational dermatomycosis known locally as "fruit poisoning." Included in the study was the isolation of the etiologic organism, the results of animal and human innoculations, and a description of the clinical and histologic pathology as observed in the cases studied. Coincident with the foregoing work, parallel studies were undertaken by Professors Myers and Thienes of the department of pharmacology in an endeavor to find an effective form of therapy. Prior to the time of their study, investigation had revealed the fact that the disease ran a fairly definite course in practically every case. The usual history was that it progressed to a point at which one or more nails were lost, or the person affected discontinued his occupation. Furthermore, these symptoms were known to persist in spite of frequent and prolonged trial of remedies ordinarily effective in this type of invasion. With this information at hand, and being familiar with the successful use of certain volatile oils and stearoptens in preventing the growth of molds in pharmaceutical preparations, clinical application of the latter fact seemed a logical starting point for their investigations. Acting on this suggestion, they arrived at a method whereby they were able to bring about clinical recovery in cases under observation in a manner to be compared only to the response of certain infections to their known specifics. By modifying their methods somewhat, these investigators were able to institute prophylactic measures available to persons employed in the canning industry, to the end that the incidence of the condition has been decreased to a considerable degree. This rather striking clinical demonstration with a condition which had previously proved refractory to ordinary methods of attack immediately suggested a new field of usefulness for this group of drugs. The present study has been undertaken therefore in an endeavor to establish the possible effectiveness of these

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agents in allied types of cutaneous invasion for which, in certain instances at least, it would seem that there is not now an entirely satisfactory therapy.

So far as we have been able to determine, but few chemotherapeutic investigations in connection with the pathologic molds and fungi have been undertaken in the past. In 1898, Bokorny [1] published a monograph dealing with the fungicidal activity of a number of drugs, including some of the essential oils. His studies, for the most part, dealt with the organisms of putrefaction and the possible preservative activities of the drugs in question. In 1922, Schamberg and Kolmer [2] published the first comprehensive study of this kind. Using various dyes and medicaments (not including these oils), they were able to determine the relative fungastatic and fungicidal activities of commonly used drugs under conditions of laboratory control. In so doing, they were able to show that many of the present antiparasitics, in spite of a popularity justified by long clinical experience, fall disappointingly low both in their capacity to kill and in their ability to inhibit organisms they are ordinarily used to combat. As indicated by these authors in their conclusions, while test tube experiments cannot controvert clinical facts, such observations are suggestive at least that future study may be productive of remedies more specific than those now used. In 1925, Myers and Thienes [3] published the results of the investigation already mentioned. By using certain of the volatile oils and the stearopten thymol against the organism of the so-called "fruit poisoning," they were able to establish the superior effectiveness of thymol, cinnamon and clove, and to substantiate the clinical experience already described.

In undertaking a study of this nature, it was felt that its interest would be determined largely by the number of organisms used in the experiments. Approximately forty organisms were used, which included a range of types, therefore differing widely in cultural characteristics and in the clinical pictures with which they are associated. In the beginning, every dilution of each drug was used against each of the forty organisms. It was soon found that a certain group of organisms was highly susceptible, with readings practically always parallel. Because of the tremendous amount of cultural work necessary in working with large numbers of both medicaments and organisms, the more susceptible

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1. Bokorny, T.: Ueber die Wirkung der ätherischen Oele auf Pilze, Arch. f. d. ges. Physiol., pp. 555-594, 1989.

2. Schamberg, J. F., and Kolmer, J. A.: Studies in the Chemotherapy of Fungus Infections, 1. The Fungistatic and Fungicidal Activity of Various Dyes and Medicaments, Arch. Dermat. & Syph. **6**:746 (Dec.) 1922.

3. Myers, H. B., and Thienes, C. H.: Fungicidal Activity of Certain Volatile Oils and Stearoptens. Their Comparative Toxicity on a Pathologenic Yeastlike Organism: Report of Clinical Utilization in Related Infections, J. A. M. A. **84**:1985 (June 27) 1925.

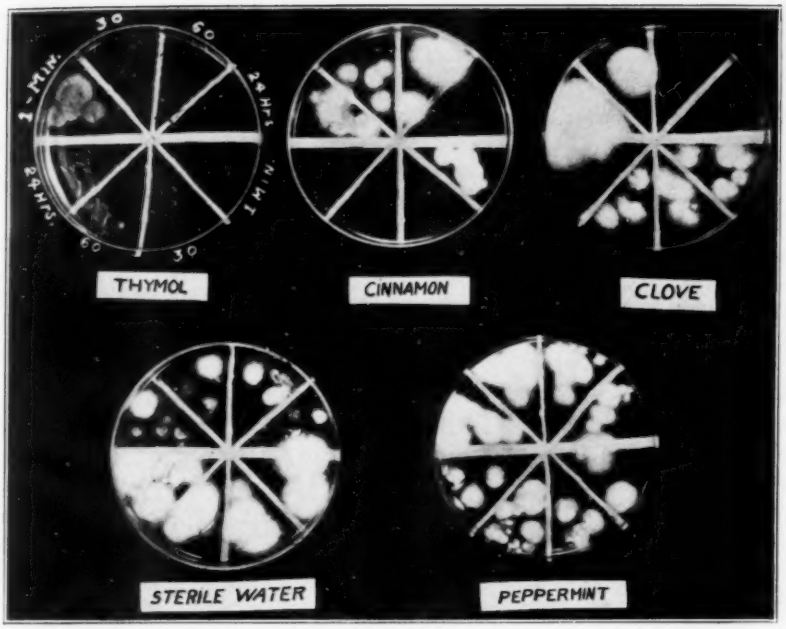

Fig. 1.—Fungicidal test, showing results of exposing organisms to drugs for varying periods of time.

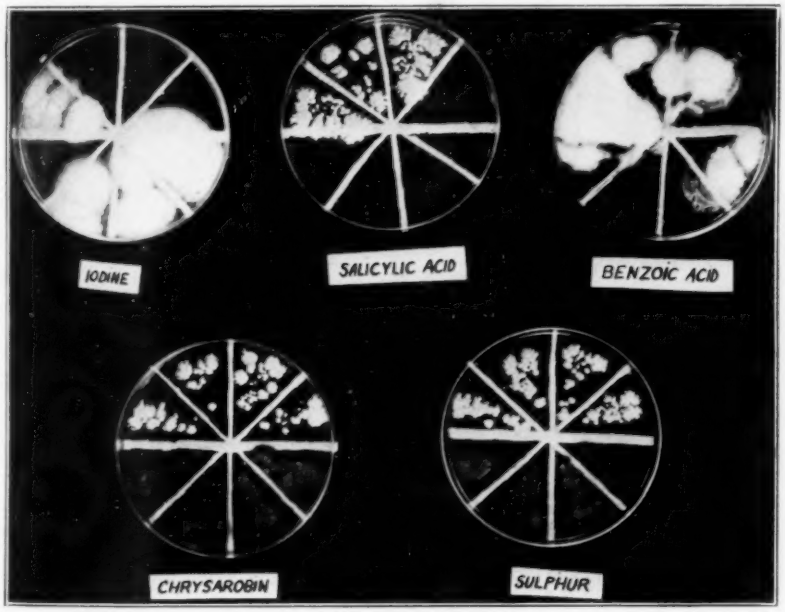

Fig. 2.—Fungicidal test; continuation of figure 1.

organisms were eliminated early, and further work was confined to the remaining twenty. These represent those found most resistant to drug activity in earlier experiments. Our tables, therefore, show the results with this group of twenty; yet presumably they are fairly indicative of a more general interpretation. That the work could be carried on in this manner is due to the courtesy of Dr. Fred Weidman, to whom we are indebted for practically the entire group of cultures.

The oils used were suggested and furnished by Professor Myers of the department of pharmacology. To this department we are also indebted for the other standard (Merck) drugs used. The solid medium

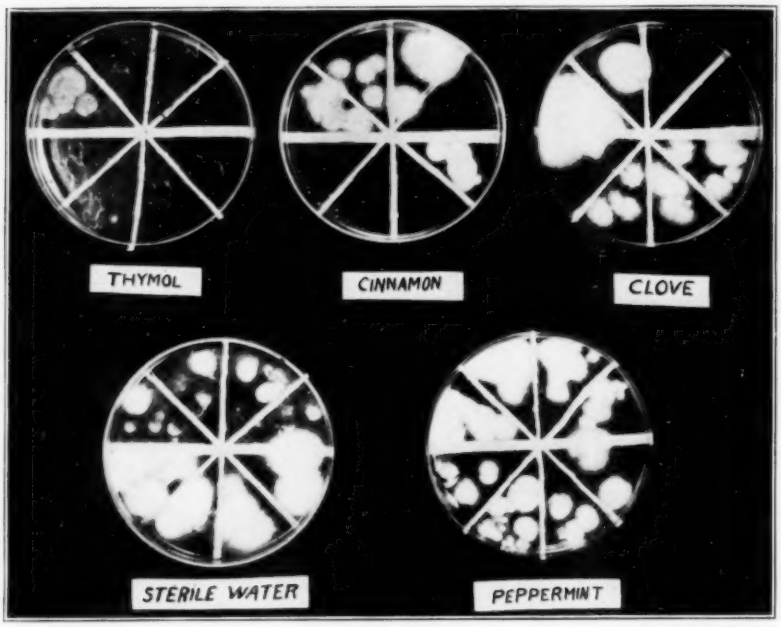

Fig. 3.—Fungicidal test; continuation of figures 1 and 2.

used was Sabouraud's dextrose agar titrated to p_H of from 5.2 to 5.4; the liquid medium used was dextrose broth.

With few changes the two methods of study followed throughout our experiments were those employed by Schamberg and Kolmer.[2] The first method consisted of an endeavor to find the strength of each medicament which, under varied conditions, was necessary to kill cultures of various organisms; the second method was an attempt to determine the dilution of each drug which, when incorporated in a medium, would inhibit or restrain growth. The former Schamberg called the "fungicidal test"; the latter, the "fungistatic." In order to gain some idea of the comparative activity, under the conditions of the study, certain drugs of established usage were included; these were precipitated sulphur,

iodine, chrysarobin, salicylic acid, and benzoic acid. All of the experiments were checked and repeated, and sterile distilled water controls were used throughout.

FUNGICIDAL TEST

In attempting to establish the actual destructive properties of the drugs under study, two methods were employed. The first consisted of determining the length of time necessary to expose a given organism to a solution or suspension of drug in order to prevent its growth when transferred to a favorable medium.

As we were familiar with the known irritative qualities of the various oils when employed as such, it was decided to use only aqueous solutions or aquae. For thymol, this represents a maximum aqueous content of 1 : 1,010 or a dilution of approximately 1 : 1,000. The solutions or suspen-

TABLE 1.—*Fungicidal Test*

Drugs	Time of Exposure			
	1 Minute	30 Minutes	60 Minutes	24 Hours
Thymol	93%*	100%	100%	100%
Cinnamon	8%	21%	36%	86%
Cloves	14%	22%	36%	71%
Peppermint	None killed	None killed	None killed	14%
Wintergreen	None killed	None killed	None killed	14%
Thyme	None killed	None killed	None killed	None killed
Lemon	None killed	None killed	None killed	None killed
Eucalyptus	None killed	None killed	None killed	7%
Camphor	None killed	None killed	None killed	7%
Menthol	None killed	None killed	None killed	21%
Iodine	64%	71%	79%	84%
Salicylic acid	29%	64%	64%	93%
Sulphur	7%	7%	21%	29%
Chrysarobin	7%	7%	21%	50%
Benzoic acid	None killed	57%	57%	86%

* Percentage denotes organisms killed.

sions of all drugs used in the experiments therefore were 1 : 1,000, and it is on such a basis that we established the following comparisons. The method used was as follows: Broth cultures of the various organisms were incubated (usually seventy-two hours) until on agitation the tube contents averaged from 5,000 to 32,000 organisms per cubic millimeter in suspension. One cubic centimeter of suspension was added to the tubes which contained 2 cubic centimeters of a 1 : 1,000 solution of the drug to be tested. The resultant mixture was then kept in agitation, and at intervals of one minute, thirty minutes, one hour, and twenty-four hours, transplants were made by transferring several loopfuls to plates of Sabouraud's dextrose agar. These were incubated for seventy-two hours, then left at room temperature for several weeks. Readings were taken at the end of this period, and final results charted (table 1).

The most striking feature in table 1 (see figs. 1, 2, 3), is the activity of thymol compared with the volatile oils used. With this drug, 93 per cent of the organisms were destroyed by a one minute exposure,

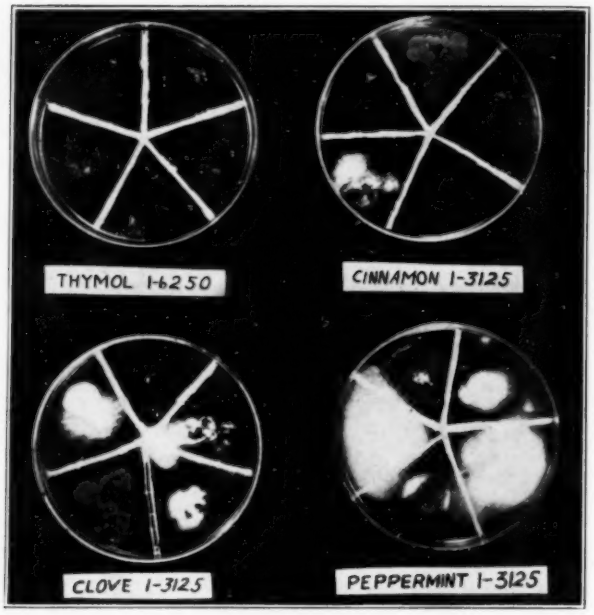

Fig. 4.—Fungicidal test, showing effect of exposure of organisms to dilution of drug.

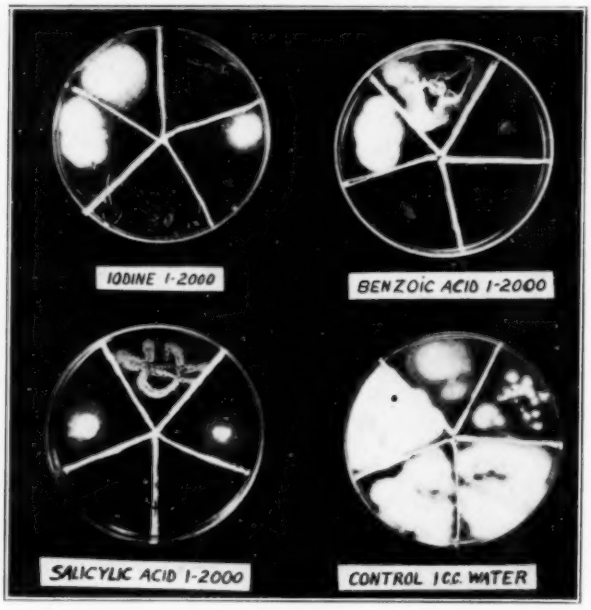

Fig. 5.—Fungicidal test; continuation of figure 4.

while none survived the other time intervals employed. Next in effectiveness were clove and cinnamon, in the order named, yet destruction did not seem complete even after an exposure of twenty-four hours. As for the other oils used, they seem little more effective than distilled water, and for that reason were omitted from further study. The second interesting observation made during the experiment was that concerning the activity of iodine, salicylic acid, sulphur, chrysarobin and benzoic acid. While iodine seems most nearly to approach the activity of thymol in rapidity of action, benzoic acid, a perhaps equally popular drug, is surprisingly low in effectiveness. Salicylic acid, sulphur and chrysarobin are found between these two extremes in the order named. Of particular

TABLE 2.—*Results of Fungicidal Test*

Organism	Thymol 1 to 6,250	Cinnamon 1 to 3,125	Clove 1 to 3,125	Iodine 1 to 1,000	Iodine 1 to 2,000	Benzoic Acid 1 to 1,000	Benzoic Acid 1 to 2,000	Salicylic Acid 1 to 1,000	Salicylic Acid 1 to 2,000	Ppt. Sulphur 1 to 50	Chrysarobin 1 to 50	Control 1 Cc. Water
Epidermophyton rubrum	—	—	—	—	—	—	—	—	—	+	+	+
Trichophyton pedis	—	—	—	—	—	—	—	—	+	+	+	+
Microsporon fulvum	—	—	+	—	—	—	—	—	—	+	+	+
Achorion gypseum	—	+	+	—	—	—	—	—	—	+	+	+
Trichophyton gypseum radiolatum	—	+	+	—	—	—	—	—	—	+	+	+
Trichophyton interdigitale	—	—	—	—	+	—	—	—	—	+	+	+
Coccidioides immitis	—	—	—	—	—	—	—	—	+	+	+	+
Epidermophyton rubrum	—	—	—	—	—	—	—	—	—	—	+	+
Achorion quinckeanum	—	—	—	—	—	—	—	—	—	+	+	+
Achorion schonleinii	—	—	+	—	—	—	—	—	—	+	+	+
Blastomycosis	—	—	—	—	—	—	—	—	—	+	+	+
Sporotrichum schenki	—	—	—	—	—	—	+	—	+	+	+	+
Microsporon lanosum	—	—	+	—	—	—	—	—	+	+	+	+
Epidermophyton inguinale	—	—	+	—	+	—	—	—	+	+	+	+
Trichophyton gypseum asteroides	—	+	+	—	—	—	—	—	—	+	+	+
Trichophyton pedis	—	—	—	—	—	—	—	—	—	+	+	+
Unidentified	—	+	+	—	+	—	—	—	—	+	+	+
Blastomycosis	—	—	+	—	+	—	+	—	+	+	+	+
Trichophyton interdigitale	—	—	—	—	—	—	—	—	—	+	+	+
Fruit	+	+	+	—	+	—	+	—	+	+	+	+

interest in the case of the latter drugs is the fact that in none of them, are the organisms completely destroyed, even after twenty-four hours' exposure.

With this knowledge, we undertook a second experiment. In this, we endeavored to determine the greatest dilution of the medicaments which when incorporated in a proper medium would destroy organisms innoculated therein. For this we used the following method.

Tubes containing 4 cc. of liquid medium were inoculated with material from fresh stock cultures. To the tube contents we added an amount of solution or suspension of drug depending on the dilution being tried. The tube contents were thoroughly mixed, incubated for seventy-two hours, again thoroughly agitated and several loopfuls transferred to Sabouraud's agar plates. These were then incubated for seventy-two hours and left at room temperature for from four to six weeks. Readings of the finally effective dilutions were taken from the plates (see figs. 4 and 5); the results are shown in table 2. From this

table it would appear that the observations of table 1 were fairly substantiated. Again thymol transcends the other drugs used, the one exception being the organism of "fruit poison," with which its effectiveness has been clinically demonstrated. Next in order are the oils of

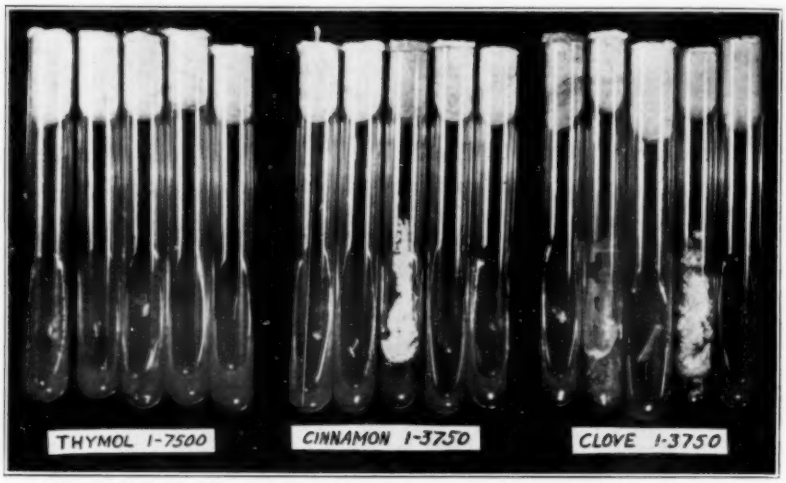

Fig. 6.—Fungistatic test, showing inhibitive capacity of drugs.

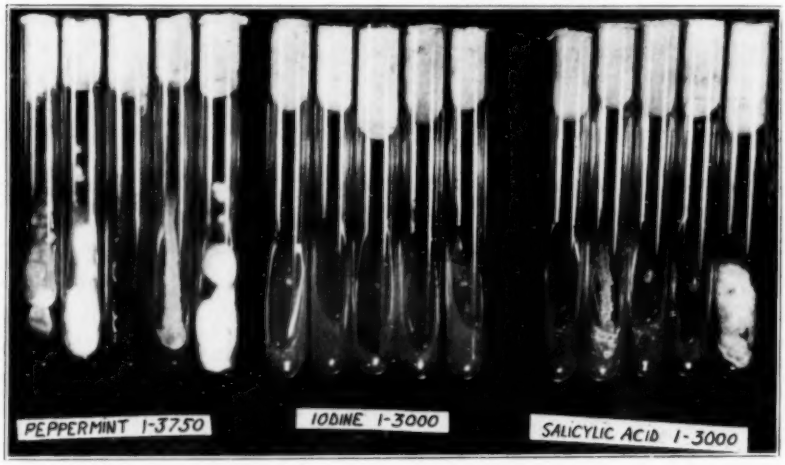

Fig. 7.—Fungistatic test; continuation of figure 6.

cinnamon and clove, yet for equal activity a dilution one-half as great is necessary. In the order named iodine, benzoic acid and salicylic acid are effective; however, from the standpoint of dilution, their activity is but one-third that of thymol. It seems at least noteworthy that the equivalent of a 2 per cent suspension of sulphur or chrysarobin has little if any effect on the growth of the organisms.

The latter experience practically parallels that of Schamberg and Kolmer [2] with the same drugs. That we have not experienced a similar parallel in our work with iodine, benzoic and salicylic acid, seems to be explained by the large number and the variety of organisms used.

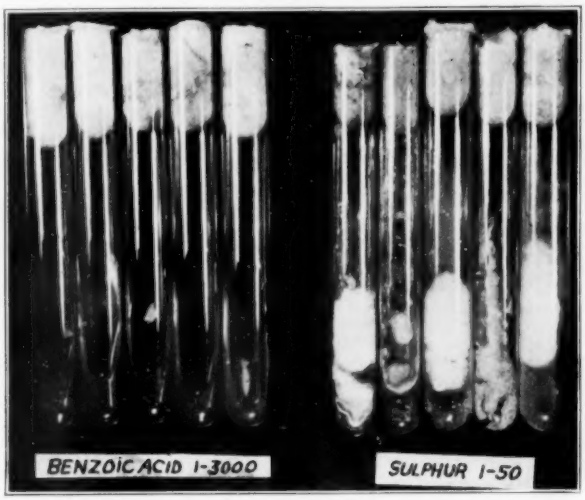

Fig. 8.—Fungistatic test; continuation of figure 7.

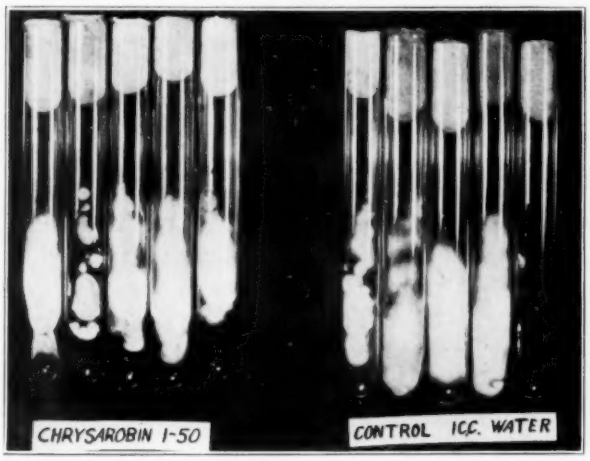

Fig. 9.—Fungistatic test; continuation of figure 8.

FUNGISTATIC TEST

In these experiments, our purpose was to determine approximately the highest dilution of the various drugs which, when incorporated in a solid culture medium, would prevent the growth of organisms inoculated thereon. While such tests can scarcely convey the significance attached

to similar investigations concerning the destructive power of a possible remedy, it would seem that such a procedure should at least furnish confirmatory information. In these experiments, tubes containing 8 cc. of Sabouraud's medium were used. The agar was melted and cooled to 40 cc.; to it varied amounts of a 1 per cent solution or suspension of drug were added, depending on the dilution being tried. The agar was slanted and allowed to cool. The tubes were then seeded from fresh stock cultures, incubated for twenty-four hours and then kept at room temperature for from four to six weeks, during which time frequent readings were taken (figs. 6, 7, 8 and 9). The final readings are shown in table 3.

TABLE 3.—*Results of Fungistatic Test*

Organism	Thymol 1 to 7,500	Cinnamon 1 to 3,750	Clove 1 to 3,750	Iodine 1 to 2,000	Iodine 1 to 3,000	Benzoic Acid 1 to 2,000	Benzoic Acid 1 to 3,000	Salicylic Acid 1 to 2,000	Salicylic Acid 1 to 3,000	Ppt. Sulphur 1 to 50	Chrysarobin 1 to 50	Control 1 Cc. Water
Epidermophyton rubrum	—	—	—	—	—	—	—	—	—	—	—	+
Trichophyton pedis	—	—	—	—	+	—	—	—	—	+	+	+
Microsporon fulvum	—	—	—	—	+	—	—	—	—	+	+	+
Achorion gypseum	—	—	—	—	+	—	—	—	+	+	+	+
Trichophyton gypseum radiolatum	—	—	—	—	+	—	—	—	—	+	+	+
Trichophyton interdigitale	—	—	—	—	+	—	—	—	—	+	+	+
Coccidioides immitis	—	—	—	—	—	—	—	—	—	—	—	+
Epidermophyton rubrum	—	—	—	—	+	—	—	—	—	+	+	+
Achorion quinckeanum	—	—	—	—	+	—	—	—	—	+	+	+
Achorion schonleinii	—	—	—	—	—	—	—	—	—	+	+	+
Blastomycosis	—	—	—	—	—	—	—	—	—	+	+	+
Sporotrichum schenki	—	—	—	—	+	—	—	—	+	+	—	+
Microsporon lanosum	—	—	—	—	+	—	—	+	+	+	+	+
Epidermophyton inguinale	—	—	—	—	+	—	—	—	—	+	+	+
Trichophyton gypseum asteroides	—	—	—	—	+	—	—	—	—	+	+	+
Trichophyton pedis	—	—	—	—	+	—	—	—	—	+	+	+
Unidentified	—	—	+	—	+	—	—	—	+	+	+	+
Blastomycosis	—	—	+	—	+	—	+	—	+	+	+	+
Trichophyton interdigitale	—	—	—	—	+	—	—	—	—	+	+	+
Fruit	—	—	—	—	+	—	+	+	+	+	+	+

The effectiveness of higher dilutions as suggested by this chart appears logical. Similar comparative values have been demonstrated by the foregoing work of Schamberg and Kolmer.[2] It would seem that the interesting observation is that of comparison and emphasizes further an apparently greater activity on the part of the oils than that of the remedies with which they are compared.

COMMENT

As already stated, the foregoing experiments have had as their stimulus the striking response of a resistant infection to a group of familiar drugs hitherto little employed in such a rôle. This previous, somewhat empiric, yet nevertheless successful, clinical treatment, may well add significance to the results already mentioned. That they are well known would seem to obviate the necessity of their detailed chemical description. The possible objection to their future clinical trial, that of their known irritative qualities, would seem to be entirely eliminated

by the fact that only aqueous solutions have been employed throughout. In the tests we have included a relatively large group of known invaders in the hope that the observations would be made more significant thereby. The results, including the strikingly favorable comparison with time honored remedies, are submitted only as evidence gained by laboratory experiment. Final evaluation must await clinical experimentation, and by the foregoing results, it would seem that such experimentation was justified.

CONCLUSIONS

1. The foregoing study has been undertaken in an endeavor to establish experimentally the possible effectiveness of certain volatile oils in combating pathologic molds and fungi.

2. For purposes of comparison, all experiments made with the foregoing tests have been duplicated with more commonly used remedies.

3. Under the conditions of the experiment, the aqueous solutions of thymol, cinnamon and clove, in the order named, have proved superior to the other medicaments included.

4. Their superiority is manifest not only in the experiments determining the approximate killing power of the drugs, but also in their capacity for restraining growth of the organisms against which they were used.

5. A discussion of the various types of organisms used and the possible specificity of the medicaments under study is intentionally omitted in this report.

6. Fully realizing the vast difference between experimental observations and clinical facts, the results submitted herein are presented merely as suggestive laboratory evidence justifying clinical experimentation now in progress.

ABSTRACT OF DISCUSSION

Dr. Richard L. Sutton, Kansas City, Mo.: While I did not have any idea that thymol was so strong a parasiticide, I now recall some clinical evidence which supports these laboratory tests. As in all other American cities, we have had much trouble successfully combating ringworm of the soles and palms. Two or three years ago, I discovered that several intractable cases of this disorder had responded favorably to a patent or proprietory remedy which I found, on investigation, contained a considerable amount of thymol. It is probable that the curative value of the mixture was due to its thymol content.

Dr. James Herbert Mitchell, Chicago: This is the kind of work that we shall have to do in the future if we are to make any progress in the treatment of patients with fungus infections.

I also wish to express my appreciation of the formula containing oil of cinnamon and thymol. Since that paper was published, I have used this preparation constantly, and I find it of great value. It is clean, does not stain, is only slightly irritating, and can be used in vesicular lesions on both hands and feet with

excellent results. I find it particularly applicable in the palmar lesions, because it does not stain the skin and apparently kills the organism quickly.

Dr. Howard Fox, New York: I agree with the other speakers that this is a very useful piece of research work, with practical bearing. We all know the effect of thymol in hookworm infestation, and it is interesting to note its powerful fungicidal effect, as shown by Dr. Kingery. Some of us have used the fungicidal ointment containing eucalyptol, which was devised by Deeks and heartily recommended by Castellani. It might be possible to use a preparation containing thymol in place of eucalyptol.

Dr. Jay Frank Schamberg, Philadelphia: I think that Dr. Kingery's work may serve not only as a basis for academic study, but may yield practical results. I am glad to hear that his results are in accord with our own regarding the low germicidal action of chrysarobin and sulfur. We found, as you may recall, that if one implants chrysarobin powder on culture mediums, various organisms will grow. Dr. Kingery realizes, as we all do, that experiments in vitro do not always indicate the power of the same drugs in vivo. Drugs in the test tube commonly destroy various parasites, but in the living organism they often fail, for many reasons. They may enter into combination with various organic tissues or cells, and consequently their combining affinities may be satisfied before reaching the germs. Furthermore, if they do come in contact with parasites, they must have the power to penetrate their wall and combine with the protoplasm.

I am greatly pleased to learn of the fungicidal effect of thymol as shown by Dr. Kingery; I believe these observations should stimulate further study. After all, it is not only the bacterial or fungicidal effect of the oil which must be considered, but also the penetrative power of the substance. We realize how rebellious certain fungus infections of the skin are. One may apply to the skin admirable drugs and combinations which have been shown to be extremely effective in the laboratory, and yet the clinical results may be poor; on the other hand, one may obtain excellent results clinically with preparations that do not show up so well in the test tube. Many clinical substances are not able to penetrate and attack the organisms. In our studies, we showed that a number of the dyestuffs had definite fungicidal properties, for instance, crystal violet and brilliant green. We have recently made up some dyestuff with metallic compounds, and they are now receiving clinical trial. After all, it is the clinical trial that must decide the value of a substance.

There seems to be some discrepancy between Dr. Kingery's experiments regarding salicylic acid and ours. We found that if we used from 0.5 to 1 per cent of salicylic acid in the culture mediums, many fungi were able to grow in such a concentration. Dr. Kingery's figures show a higher fungicidal value for salicylic acid. This may be due to the fact that he was using different organisms. While Dr. Kingery's work is academic in its present stage, it establishes leads for clinical investigation. I should like to emphasize the point that another essential of a remedy with the ability to kill parasites is its ability to penetrate the tissue in which the parasite resides, and also to penetrate the wall of the parasite itself.

Dr. William H. Guy, Pittsburgh: I wish to know whether Dr. Kingery has used thymol in ointment bases with massage in an attempt to introduce the drug into the tissues.

Dr. Fred D. Weidman, Philadelphia: I wish to ask Dr. Kingery how he avoided contamination by the Petri dish technic, or whether there were bacterial colonies present in addition to the fungi.

I also wish to express satisfaction at seeing that the mycelium of mycologic research is not limited to any part of the United States, but now covers the entire map.

DR. SIGMUND POLLITZER, New York: This subject interests me greatly from another aspect. From time immemorial, essential oils have been used in medicine, of course in the crudest way, but it is interesting to know that there is a scienitfic basis for their use.

In regard to the use of thymol, when I was studying protein digestion in Heidelberg over forty years ago, it was always a problem to keep the alkaline mixture of a trypin digestion from being entirely overrun with fungi and bacteria. That was accomplished, however, by the use of thymol; by simply sprinkling a little powdered thymol over the surface of the mixture in which digestion was going on it was kept pure and sweet.

In referring to the ancient use of the essential oils, I hope I shall not be understood as depreciating in any way the value of this admirable work; Dr. Kingery's work rests on a secure quantitative basis.

DR. LYLE B. KINGERY, Portland, Ore.: I am grateful for this courteous discussion of our paper. The question that occurred to us repeatedly is whether with certain of the remedies that have been used for so many years the response may not have been so much due to actual killing qualities of the drugs as to the fact that they created an unfavorable medium for the organism that was present. As Dr. Schamberg has pointed out, there is undoubtedly a vast difference between the culture growing in a test tube and that growing on the skin, and it seems to us that whether or not this work will mean much in the future depends on our ability to incorporate the drug in a medium that will carry it to the point of infection. I believe this answers Dr. Guy's question, and experiments are now under way which I trust will settle this point.

In regard to the question of contamination brought up by Dr. Weidman, I may say that whenever that occurred the experiment was repeated.

IDIOPATHIC TRICHOCLASIA OF JACKSON-SABOURAUD

REPORT OF A CASE *

ANGELOS E. MARCOGLOU, M.D.
NEW YORK

The following terms are defined in order to obviate any confusion that may exist on the part of the reader concerning the nomenclature of the subject of this article.

Trichorrhexis nodosa, as the name implies, is characterized by the presence on the shaft of the hair of one or more irregularly spaced, small, grayish nodes, which suggest nits. Microscopically, these nodes at that point show a longitudinal splitting of the hair resembling two small paint brushes pushed together end to end (fig. 1).

Trichoclasia, essentially a later stage of trichorrhexis nodosa, is the transverse fracture of the shaft of the hair occurring at the middle of the nodes, as a result of the hair losing its resistance to traction at that point (fig. 2).

Trichoptilosis is the longitudinal splitting of the shaft of the hair into numerous long fibrils in the shape of a feather.

The etiology of the disease known as trichorrhexis nodosa and trichoclasia is still a subject of uncertainty and discussion. Hodara,[1] Spiegler,[2] Dekeyser,[3] Raymond [4] and others regard the disease as due to a parasite.

Heidingsfeld [5] and Rauber [6] attribute it to trophic disturbances. A third group of workers, among whom are Wilson,[7] Wolfberg,[8] Sabouraud,[9] Lasueur,[10] Adamson [11] and Brocq,[12] seem to be convinced

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* From the Department of Dermatology and Syphilology of the Vanderbilt Clinic, Columbia University.

1. Hodara: Monatschr. f. prakt. Dermat. **19**:173, 1894.
2. Spiegler: Verhandl. d. deutsch. dermat. Gesellsch., 5th Congress, 1895, p. 366.
3. Dekeyser: Belgian Soc. Dermat. & Syph., May, 1901.
4. Raymond: Ann. de. dermat. et syph. **2**:568, 1891.
5. Heidingsfeld: J. Cutan. Dis., 1905, p. 246.
6. Rauber: Virchows Arch., 1884, vol. 97; reported by Beck: Monatschr. f. prakt. Dermat., vol. 31, p. 361.
7. Wilson: Diseases of the Skin, ed. 6, 1867, p. 783; quoted by Schwimmer.
8. Wolfberg: Deutsche med. Wchnschr., 1884, no. 31.
9. Sabouraud, quoted by Lasueur: Ann. de dermat. et syph., 1906, p. 911.
10. Lasueur: Ann. de dermat. et syph., 1906, p. 911.
11. Adamson: Brit. J. Dermat., 1907, p. 99.
12. Brocq: Traite Elementaire de Dermatologie Pratique, vol. 2, 1907, p. 619.

that this disease is due to a mechanical injury produced by the application to the scalp of alkaline preparations as by repeated shampooing, dyeing or waving of the hair and other procedures. The mechanical theory is the one most widely accepted today, as these conditions occur in larger cities among fashionable women who are regular clients of hairdressing parlors.

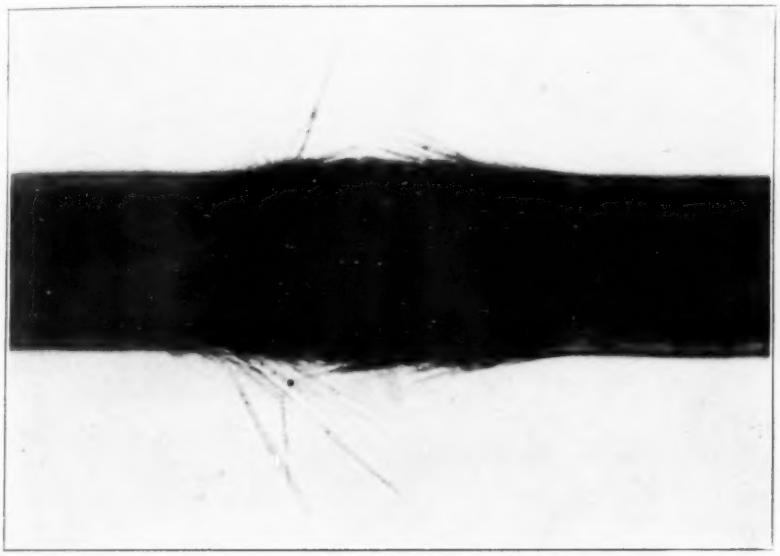

Fig. 1.—A hair showing a node with bursting at that point (trichorrhexis nodusa).

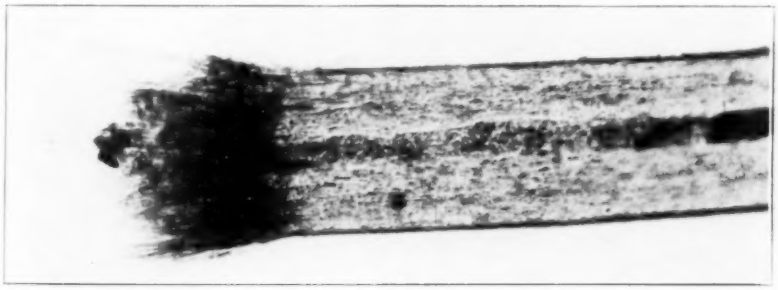

Fig. 2.—A completely broken off node with a brushlike free end (trichoclasia).

Besides these more common cases of trichoclasia and trichorrhexis which are of a general character and which affect the hairs in all parts of the body, there are rarer cases which are localized in circumscribed plaques. Because of their rarity, the latter have been little studied and are not sufficiently known.

Two cases of the last known variety were described for the first time by Jackson [13] as follows:

> In one of the cases there were patches in which the patient's hair did not grow. Examination showed that his hair was thinned and that his scalp was bound down to his skull so closely that it was hard to move. There was no sign of dandruff. His hair was dry and lusterless. The patches were sharply defined like patches of ringworm. There was no sign of inflammation. They disappeared in six months, all the hair being normal in appearance.

In his second case, his examination showed "that there were two well marked, round, sharply defined patches about the size of a silver dollar in which the hair was short and apparently broken off. On the back of the head there was another patch in which the hair was broken off and curled close down to the scalp presenting an appearance similar to the curly hair of a negro. There were no signs of inflammation. A microscopical examination by Wende and Meuborn disclosed no parasites but showed many hairs with evidence of trichorrhexis. The patient made a perfect recovery in a few months." Jackson believed that in their manner of beginning and ending both cases were suggestive of a neurotic origin.

Sabouraud [14] almost simultaneously and without knowledge of Jackson's observations published two descriptive articles on the same subject. He distinguished three different types of this peculiar form of trichoclasia.

1. A trichorrhexis localized on the mustache, the hairs showing from five to six small nodules (pearls) from 3 to 5 mm. from each other. The entire mustache was involved, and even the avoidance of further traumatism did not prevent a relapse. The condition is extremely rare, Sabouraud having met with only two or three cases.

2. A trichoclasia which occurred in circumscribed, round patches on the scalp with the hairs broken off at a distance of from 6 to 8 mm. above the skin. The hairs on the spot were normal and resisted the pull of the forceps until they came out by the root. The skin in the affected area did not show any evident lesion. The plaque itself healed spontaneously, but another one developed elsewhere on the scalp. Sabouraud said that in his experience he had seen five cases of this type.

3. Similar to type number 2 are cases in which trichoclasia occurs in patches but in which it is accompanied by visible lesions of the skin. The latter is pruriginous and dry and becomes thickened and rough to the touch, and adherent to the skull. Sabouraud named this morbid type idiopathic or spontaneous trichoclasia, a name which, according to him,

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13. Jackson, G. T.: J. Cutan. Dis., 1903, p. 473.

14. Sabouraud: Trichoclasies, Trichorrhexis and Trichoptiloses, Ann. de dermat. et syph., 1921, p. 445.

served to disguise ignorance of their etiology. He believed, nevertheless,[15] that the changes seen in cases of the group number 3 type, although apparently induced by the same mechanical factors that were responsible for the common type of trichorrhexis, followed an ordinary dermatosis of the type of a neurodermite. In 1914, Ormsby [16] presented before the American Dermatological Association one case of circumscribed trichoclasia, which was identified by Jackson as one similar to his own case.

Jeanselme and Bloch,[17] in 1923, presented before the French Dermatological Society two cases of idiopathic trichoclasia, in which the plaques were situated in the frontoparietal region. Abnormalities of the hair or scalp were not present.

I had the occasion to observe a patient who presented the conditions as outlined in group 3 of Sabouraud's classification and called by him idiopathic trichoclasia. This patient was under my observation for fifteen months and thus afforded me an opportunity to study the behavior of this disease.

REPORT OF A CASE

A. A., a student, aged 26, born in Thrace (Turkey), had been in this country for about four years and had always been in good health. About two years before consulting me, his attention was called to a spot on the top of the scalp on which the hair was short. The patient said that that patch was about the size of a half dollar, round and well defined. He had some tenderness occasionally in this area, but other symptoms were not present. He consulted a physician who cured him with the use of some ointment. About one year ago, a recurrence took place in the same area, for which he consulted me in January, 1926.

At that time, the patch was nearly round, about 6 cm. in diameter and was situated in the middle of the right area, slightly nearer to the anterior than to the posterior aspect. The patch itself was sharply defined and was made up of hairs ranging in length from 1.5 to 2 cm. The length of the hair outside of the patch was easily two or three times longer. On careful examination of the short hairs, two or three small, grayish nodosities were seen; otherwise the consistency and the resistance to traction with forceps were normal. The skin in this patch was pinkish red, dry and rough in appearance; it felt thickened and was somewhat adherent to the underlying bone. There was a marked enlargement of the follicular openings.

A microscopic examination of several hairs from the spot showed that their ends were of a broomlike appearance (trichoclasia). In the shaft of many of these hairs there was a bulging of the cortex and a dove-tail appearance (trichorrhexis). A few of them had a longitudinal splitting of the shaft (trichoptilosis). Occasionally, a single hair would present all of these features (fig. 3).

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15. Personal communication to the author.

16. Ormsby, Oliver: A Practical Treatise on Disease of the Skin, Philadelphia, Lea & Febiger, 1921, p. 1046.

17. Jeanselme and Bloch: Bull. de Derm. et Syph., 1923, p. 79.

There was no alteration of the hair bulb or of the hair shaft. The other hairs on the scalp, as well as those on the eyebrows and pubic areas, were normal. A culture of a few hairs taken from the patches was negative.

Weekly application to the lesion of ultraviolet rays with the air cooled lamp, from Feb. 5 to April 9, 1926, resulted in the hairs attaining their normal length. The skin, aside from a little thickening, was now normal in appearance.

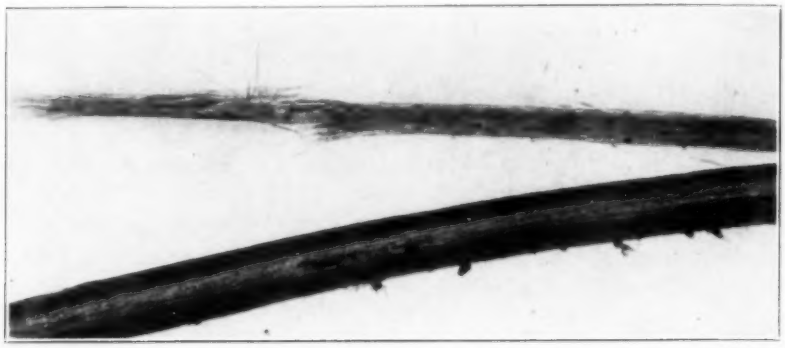

Fig. 3.—Hair showing longitudinal splitting of the shaft (trichoptilosis) with coexisting bursted node and broomlike end.

Fig. 4.—Photograph of the scalp of the patient as seen the second time.

The patient came to see me again about one year later because of a return of the condition two weeks previously. He said that for about a year the only local application he had used was the usual washing with soap. At the exact site of the former lesion there was a small oval patch, about 2.5 cm. in diameter, presenting lesions of the hair and skin similar to those seen the year before (fig. 4).

Subjective symptoms were not present. A microscopic examination and a culture of a few hairs were again negative for parasites. A biopsy taken this time was prepared and examined, and was reported on by Prof. J. G. Hopkins as follows (fig. 5):

The section shows a small piece of scalp tissue in the center of which is a group of three hair follicles. The epidermis at a distance from the follicle is

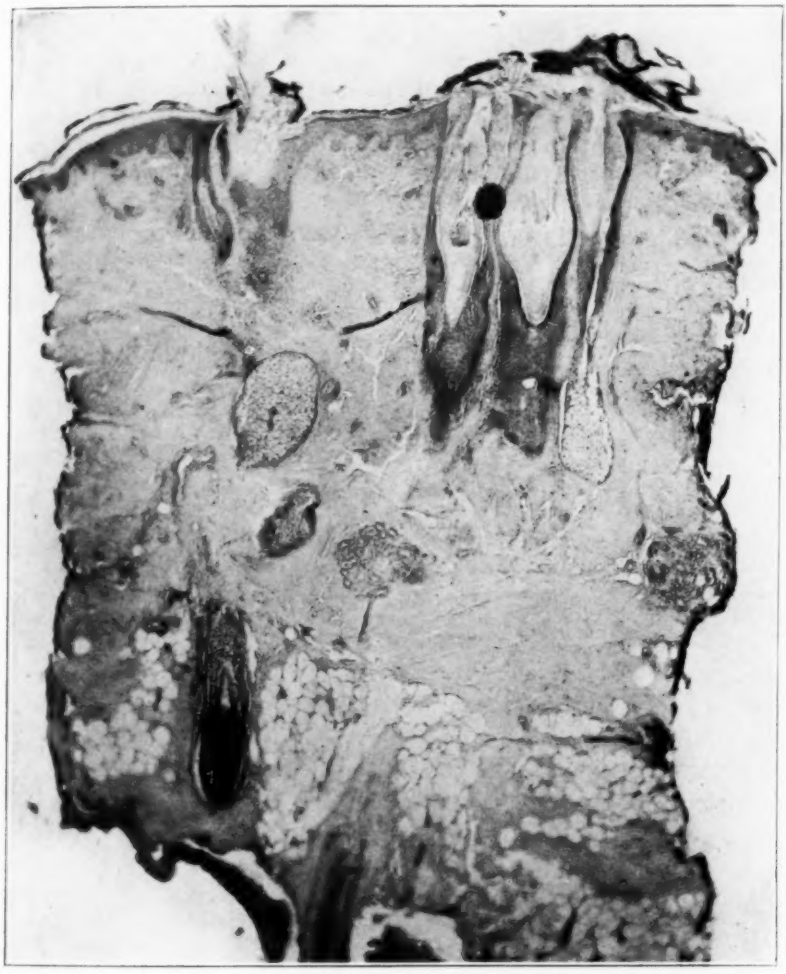

Fig. 5.—Photograph of the section.

normal but close to the follicle it is somewhat thickened, causing a narrowing of the opening of the hair funnel. Below the surface, the funnel and individual hair follicles are distended with a mass of rather loose keratinized tissue in which are the fragments of atrophic hairs. The follicular walls in this region are thinned out to a layer of three or four cells. Two of these follicles cannot be traced below the level of the sebaceous glands, but the third is continued as a solid strand down to a hair papilla, so that this hair, at least, is a bulb

hair unattached to a papilla. In the depth of the tissue at one side is an apparently normal hair papilla with new hair developing. In the cutis there is a slight proliferation of young connective tissue cells about the small blood vessels. There is no other evidence of inflammatory reaction and none of degeneration of tissue.

The distention of the hair follicle with desquamated horny cells probably occurs in any case in which the hair has become atrophic. A similar picture is seen in alopecia areata and alopecia seborrheica. There is no indication of an inflammatory process and no changes resembling those of neurodermatitis. The negative histologic observations would suggest that the changes in the hair must be due to some trophic disturbance or to external influences.

With the idea of Sabouraud in mind that these cases have some similarity to neurodermite, I applied 0.25 Holzknecht skin unit of roentgen ray to the spot weekly for three weeks.

Twelve days after the last exposure, March 1, the patient's hair showed signs of growth, and a microscopic examination of the hairs did not reveal any abnormality. The skin still remained thickened, rough, and bound to the skull, but it was not so marked as before the roentgen-ray treatment. On April 1, the area involved looked normal.

COMMENT

The various theories that are propounded to explain the etiology of the ordinary forms of trichorrhexis are insufficient to account for this particular type of idiopathic trichoclasia.

Thus the parasitic theory does not seem to hold if one may judge from the negative culture of hairs taken on two occasions from the affected area. Similarly, the excellent health of the patient in every respect and the absence of any previous local inflammatory process (case of Heidingsfeld) casts a doubt as to the presence of trophic alterations supposed to be due to disturbed metabolism. The mechanical causation also is improbable in the case of Sabouraud as in mine, the patients having a recurrence of the condition notwithstanding the total abstention from the application of any local irritants. The negative pathologic observations in my case are also in divergence with Sabouraud's claims, that a close relationship exists between the third type of idiopathic trichoclasia and neurodermite.

CONCLUSIONS

One can safely say, from the study of this case, that besides the common forms of trichorrhexis nodosa and trichoclasia, which are probably of mechanical causation, there are also a few cases of recurring trichoclasia. About fifteen have been recorded, which are localized in patches, with or without perceptible alterations in the skin, and the etiology of which still remains obscure.

THE PRESENT STATE OF EPIDERMOPHYTOSIS IN EUROPE

RESULTS OF AN INQUIRY CONCERNING NUMERICAL OCCURRENCE OF EPIDERMOPHYTOSIS, THE DIFFERENT CAUSATIVE FUNGI AND THE VARIOUS CLINICAL ASPECTS *

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In 1910, epidermophytosis was supposed to be a well described clinical entity when Sabouraud had added to the clinical aspects hitherto known epidermophytosis of the hands and feet. Other publications which appeared before 1914 (as articles by Dudumi, 1913; Nicolau, 1913, and Fischer, 1914) only completed the knowledge of the different clinical types of the disease without offering new facts. In 1914, the discernment that the clinical aspect of epidermophytosis was not an etiologic entity began to gain consideration. This period was inaugurated by the publications of Marie Kaufmann-Wolf; the results of other publications will not be considered, because they appeared in the epoch before Sabouraud and have not been proved by cultures (Tilbury Fox, Pellizarri, Mansouroff, Dubreuilh, Moukhtar, Whitfield and others). Knowledge of epidermophytosis has continued to develop in this direction; today, although it is the most complicated form of dermatomycosis, it is given greatest consideration in the field of mycology. In addition to German and French writers, many American authors have taken an active part in elucidating these questions; Montgomery and Culver (1914), Hartzell (1915), Ormsby and Mitchell (1916), Guy Lane (1916), White (1919), White and Greenwod (1920), Hazen (1924), Boenke (1925), Lee McCarthy (1925), Scholtz (1926) and Weidman (1926) may be mentioned.

Today, dermatologists consider under the most different denominations all the infectious diseases of the skin that are localized on parts of the body which previously appeared to be areas of predilection for epidermophytosis; names are found such as "epidermophytosis," "epidermomycosis," "trichophytosis" or even "mycotic eczema" or "parasitic eczema." Dubreuilh and Toulia interpret the word "epidermophytosis" in the widest sense when they characterize their mycotic intertrigo, caused by yeast, as a new form of epidermophytosis. The causal relationship between the clinical point of view "epidermophytosis" and the etiologic factor *Epidermophyton* had been completely lost sight of.

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In my paper, I shall try to separate from epidermophytosis the diseases which are caused by fungi of the species *Epidermophyton*. My work is merely an experiment, but it allows me to utilize the knowledge derived from my experience and to form critical questions. The paper is based on an extensive inquiry made by me in Germany, Austria, Russia, Czechoslovakia, Norway, Hungary, Finland, Switzerland, Holland and Japan. The results, therefore, permit a comprehensive survey concerning the epidermiology of epidermophytosis and the various fungi. I shall first consider the frequency of this disease, then the question of the various causative fungi and their cultural characteristics and, finally, the clinical aspect.

FREQUENCY

During the war, a great epidemic of many different clinical types of epidermophytosis occurred in Germany. Buschke, Fischer, Galewsky, Schellenberg and other authors mentioned repeatedly the epidemic and chronic nature of the disease, which first appeared in hospitals. Hoffmann reported an augmentation of mycosis interdigitalis. In 1917, the number of epidemic cases diminished, and in 1918 there was a still greater diminution. In my inquiry, I have tried to learn whether the diminution has continued during the years after the war. Twenty-six persons who answered the question had observed a further diminution in the number of cases which occurred from 1919 to 1926. Sixteen, on the contrary, reported that the number of cases of epidermophytosis was the same as before the war. Several answers revealed the great rarity of cases. On the other hand, other clinicians maintained that even an augmentation had been observed. Engelhardt of Giessen says that there were more cases of epidermophytosis than of trichophytosis in his region during the last years, although most of his patients were country people. In their answers most physicians characterized their observation of from fifteen to fifty cases every year as "stationary." Two epidemics were reported, one by Schönfeld of Greifswald (1926), in a school of 600 children; the other by Herxheimer of Frankfurt, in a surgical clinic in which the bath pans were the infectious material. A pronounced geographic distribution or a predominance of the disease in large towns was not evident.

In Hamburg, epidermophytosis has always been frequent, as Plaut (1914) and Lewandowsky (1915) reported. During my inquiries in 1926, I observed sixty-five cases of epidermophytosis among 114 cases of fungous diseases and twenty-five cases of infections by yeast. Compared to that of other years, the number of cases has increased.

Summarizing the results of my inquiry as to the frequency of epidermophytoses, I can say that a pronounced numerical distribution was not observed and that a slightly increasing number of cases was reported by several dermatologists.

MYCOLOGY

In Europe, *Epidermophyton inguinale* is cultivated from the majority of cases. In my inquiry, *Epidermophyton rubrum* was observed only six times. Several who answered, as Pinkus of Berlin and Keller of Freiburg, explain that they cultivated specimens partly from cases of eczema marginatum, and partly from cases of mycosis of the hands and feet, and the last time a white colored woolly species—therefore *Epidermophyton*—Kaumann-Wolf or *Epidermophyton interdigitale* Priestly. In 1926, Keller of Freiburg cultivated a new form of *Epidermophyton,* similar to *Epidermophyton rubrum.* Takenouchi of Japan observed among his many cases of epidermophytosis, namely, 100 every year, *Epidermophyton inguinale, Epidermophyton rubrum* and *Epidermophyton gypseum niveum,* Lee McCarthy (?).

In 1926, *Epidermophyton inguinale* was found by culture in thirty-five of my cases. A fungus of the group of *Epidermophyton rubrum* was cultivated twice, and *Epidermophyton interdigitale* was found three times. Twenty-five patients had been treated by ointments or antiseptics when they came to me. I never failed to demonstrate fungi microscopically in those cases, but culture was unsuccessful in the majority of cases. I do not believe that cultivation of the fungi in cases in which the patients have been treated is useful, because many other fungi, such as *Aspergillus, Penicillium, Botritis* and yeast, grow profusely, inhibiting the growth of *Epidermophyton* or, generally, of every causative fungus; thus, inexact results may be obtained with regard to the cause of these diseases. It is known, for example, that Naegeli of Bern cultivated in a typical case of eczema marginatum not *Epidermophyton inguinale,* but *Mastigocladium blochi.* It is admitted, however, that this result was, perhaps, accidental.

One unusual case which I observed recently and which I have not yet included in my statistics may be cited: From an isolated disease of the scalp, in a young boy, similar to microsporia, I cultivated *Epidermophyton inguinale,* as well as a fungus similar to *Epidermophyton rubrum.* Microscopically, endothrix growth was indisputably demonstrated.

I am aware that such a result is contrary to the characteristic signs which determine whether a fungus is *Epidermophyton.* What are these signs? In accordance with Sabouraud, Lee McCarthy, in 1925, answered this question in the sense that a fungus of the genus *Epidermophyton* never shows endothrix growth, either in the original lesion or in animals, although it is situated in the stratum corneum in great quantity in the immediate vicinity of the papillae of the hair, that such a fungus endeavors to establish itself on the natural wrinkles and that it causes typical diseases.

Concerning the localization and the typical diseases, many other fungi may produce the same diseases, as, for example *Trichophyton cerebriforme* or *crateriforme* in cases of eczema marginatum or *Trichophyton gypseum rotundum* and *lacticolor, Microsporon lanosum* or *Achorion amuckeanum* in cases of dyshidrosis. On the other hand, specimens of *Epidermophyton inguinale* or *rubrum* have been cultivated from diseases of the scalp, even from cases of kerion (my case, Takenouchi, Weiss, Arzt, Takeya). McCarthy contests the correctness of the observations of endothrix growth, chiefly those of Japanese authors. I believe that optical delusions or even artefacts often may have produced a false impression of the nature of the growth. I do not attach great value to the microscopic examination of the relationship between the hair and the fungus, although it is naturally made in every case; nevertheless, it is possible that in rare cases an epidermophyton may show endothrix growth. An elucidation of this question, not only by inoculation of animals, but also by experimental inoculation of the human scalp, I believe is important.

The numerous species described as *Epidermophyton* may be divided into three groups:

1. *Epidermophyton inguinale,* Sabouraud, a well described and established genus, in Ota's and Langeron's opinion because of its botanic properties, the only ones representative of the whole genus *Epidermophyton* (Lang, 1879). This species may, to a certain extent, show differences in cultures. Grover W. Wende and Catherine R. Collins have described several differences in color, as yellow-orange, pure yellow or even black. I observed yellow-green, black-gray, grayish and green types; besides, in several strains I saw a dirty green, similar to that of *Trichophyton ochropyrrazeum* Muys. Several strains showed a cerebriform, or even a crateriform, growth in the center; this was seen rarely in the first culture, but often in the subcultures. The period of the beginning of the pleomorphism varied, as did its localization, which occurred sometimes in the center and sometimes in the circumference With several strains, the cultures obtained were enormous, whereas with others they were scarcely as large as five cent pieces at the beginning of pleomorphism. I have never observed a growth that was so atypical in the first culture that a diagnosis was impossible.

2. *Epidermophyton rubrum,* Castellani. This species is extremely variable. I have examined ten strains obtained from Weidman, Ota and Benedek in addition to my own strains and several strains of *Epidermophyton* Keller. The cultures differed in the widest sense in the production of colors on milieu d'epreuve, the growth on milieu de conservation, the growth into the depth of the medium, the aspect of the surface of the culture and the form of the center and the circumference.

I concluded from these observations and from the descriptions in the literature that it was best to take collectively several closely allied strains, and form this group of *Epidermophyton rubrum*. Only small differences in the production of color or in the fluffy growth do not warrant the differentiation of a new species. In this group must be included: *Epidermophyton perneti*, Castellani, 1907; *Epidermophyton salmoneum*, de Mello, 1921; *Epidermophyton*, Keller, 1926; *Trichophyton rubidum*, Priestly; *Trichophyton* A, Hodges, and *Trichophyton purpureum*, Bang, variations I and II, Takahashi. I think that *Epidermophyton lanoroseum* (Montlaur, Dumet, Lee McCarthy) should also be included in this group.

3. *Epidermophyton*, Kaufmann-Wolf, or *Interdigitale*, Priestley. The characteristics of this species are great pleomorphism and the formation of different growths in subcultures. I have cultivated such an organism three times; besides, I have examined many strains of other authors. In cultures, the most different aspects were seen; some of them reminded one partly of *Epidermophyton gypseum*, and partly of *Epidermophyton niveum*, Lee McCarthy. The concentric circle described by Kaufmann-Wolf was observed only once. In greater cultures I saw a woolly growth in the center and a gypseum-like growth in the circumference. Other strains showed, in subcultures, a growth like that of *Trichophyton gypseum-granulosum* or *lacticolor* with only a small fluffy growth. The next subculture on the same medium, prepared on the same day as the first, was only woolly. The color of the cultures was different; some were pure white, and others were more yellow. Their center showed a cerebriform growth more often; furthermore, figures appeared like those I saw in cultures of *Trichophyton exsiccatum*, or more frilled as in those of *Trichophyton niveum*. The energy of growth was great in all cultures. In accordance with the observations of Kaufmann-Wolf, Keller and others, spirals were seen in the majority of strains; for that reason I believe that they are to be found constantly, in greater or less quantity. Spindles were not observed.

I believe that *Epidermophyton*—Kaufmann-Wolf and *Epidermophyton interdigitale* Priestley may be identified, and I propose the name *Epidermophyton variabile* for this species. Besides, *Trichophyton gypseum*, variatio C, Hodges, *Trichophyton gypseum*, variations II-IV, Ota, *Trichophyton* B, Hodges, and *Epidermophyton interdigitale*, Priestly, variatio II, Takahashi, may be ranged into this group, and perhaps, also, the trichophyton of Ota, which could not be classified on account of the development of pleomorphism.

Other species, as *Epidermophyton repens*, Eklund, 1883, or the species described by Lee McCarthy, must be mentioned. I have not had the occasion to see those strains, but, from the descriptions, I think that

several of them may be identified with one of my groups. In mycology one will always find species which have been observed only once, and by only one author; I think, therefore, that in the interest of dermatomycology several similar species should be considered collectively. To be explicit, in the mycology of epidermophytosis, one must suppose that one and the same strain is able to present morphologic variability. In this connection, I remember the observation of Weidman who cultivated *Epidermophyton* variable and later a gypseum-like fungus from one patient. Because the nomenclature is indefinite, I believe that it is best to characterize as *Epidermophyton* every fungus found in epidermophytosis which cannot be classified as *Trichophyton,* by morphologic examination or animal inoculation, and which, moreover, shows a cultural variability.

CLINICAL ASPECTS

In charatcerizing the clinical aspect of epidermophytosis, it may be said that for the diseases in question, there is no validity in Lewandowsky's statement that the aspect of a fungous disease is of a certain quality, which enables an expert on fungous diseases to recognize the causative fungus. There will always be many cases which may be elucidated only microscopically or by culture; furthermore, in many instances, a diagnosis of erosio blastomycetica or chronic eczema is made when, perhaps, secondary inflammation or even eczema has set in after too intense and too prolonged treatment in a case of epidermophytosis. A definite differential diagnosis from trichophytosis localized in the same regions is not possible.

Some observers still disclaim the causative character of the fungi found in the diseases and regard them as saprophytes. During my researches on the mycology of the human skin, I have failed to cultivate an epidermophyton from the healthy glabrous or hairy skin, as well as from cases of eczema, psoriasis and other dermatoses. I have tried to find these fungi between the toes or fingers, but without success. This view is in accord with that of Burgess, Falchi and Niethe and opposed to that of Cornbleet and Williams. As an interpretation of the results of Cornbleet and Williams the observation of Keller of Freiburg may be cited. He cultivated *Epidermophyton variabile* from the healthy skin between the toes of a patient who, during the previous summer had had eczema between his toes which apparently was of mycotic origin.

The majority who answered my inquiry have observed epidermophytosis localized only in the groins, the classic eczema marginatum. On the other hand, Schoenfeld of Greifswald and Nobl of Vienna saw only eruptions on the trunk without eczema marginatum. Eruptions of the axillae or of the mammary gland are rarely mentioned. Takenouchi of Japan reports that in his experience with 100 cases every year isolated

manifestations on the trunk or the extremities are rare. In fifty-nine of my sixty-five cases, epidermophytosis was seen in the wrinkles and on the trunk. In forty-six cases, only eczema marginatum was observed; in the other cases, eruptions on the trunk or on the axillae. According to my own experience and that of other observers, epidermophytosis inguinalis seems to be the most frequent form of this disease.

In order to obtain a point of view concerning the clinical aspect of eruptions of eczema marginatum, I have cited in my inquiry the various clinical types described by Sabouraud; namely, (1) the "type marginé," the normal type; (2) the "type érythemateux non marginé" (i.e., herpès à centre non dégagé" Devergie), a first stage of the type marginé, (3) the "type eczématoide," an aspect of an eczema combined with trichophytosis with more severe inflammation, small vesicles and pustules.

The majority of those who answered the question concerning these types had observed the first named, the type marginé; only a few mentioned the type eczématoide. Engelhart of Giessen saw the three types with equal frequency. Arzt of Vienna observed a case of eruptions similar to those of pityriasis rosea. I observed the type marginé in the majority of my cases, and the type eczématoide only once. I never saw eruptions on the abdomen or on the mons pubis, nor an infection of the anal region; this localization seems to be extremely rare, for, during twelve years, Castellani saw only ten cases of epidermophytosis circumanalis in fifty-four cases of pruritus ani.

To the three types previously mentioned, I might add a further type often observed, namely, the type erythrasmoide. In contradistinction to the opinion that differential diagnosis between erythrasma and epidermophytosis is relatively not difficult, I have observed many cases in which clinical differentiation between the two diseases was at least doubtful. The eruptions resembled erythrasma with little inflammation, being localized on one side in the majority of cases; the condition resembled a true erythrasma in its clinical course. I have never seen metastatic eruptions on the trunk; on the contrary, the disease attained a certain development, corresponding to that of an erythrasma; then it remained stationary.

Concerning the earlier conception of epidermophytosis as eczema combined with trichophytosis it is of interest to know whether areas which have a predisposition to eczema are more susceptible to infection by *Epidermophyton*. I saw the eruptions localized near the vertebral column only on the dorsum; localization was not pronounced on the breast. Although I have observed many cases of epidermophytosis during a long period, I have never seen a case in which primary eczema was infected by *Epidermophyton*. I am undecided regarding the extent to which other traumas of the skin or their consequences favor infection by *Epidermophyton*. I remember the observation of Guy and Jacob on

infection of vaccination marks by *Epidermophyton*. It is known that humid wet dressings favor infection, but during an epidemic all patients who had such dressings were not infected. I believe that, as in trichophytosis, a certain individual predisposition is necessary for infection by *Epidermophyton*.

I saw the following clinical types singly in epidermophytosis of the trunk or extremities: 1. One form was superficial and bore a strong resemblance to pityriasis sicca or only small eczematized plaques. I have no doubt that this form would easily escape notice. 2. Another form slightly resembled an eruption of chronic eczema, namely, a "type eczématoide non marginé," differing from the type eczématoide of Sabouraud only in the absence of vesicles and pustules. This form showed little tendency to increase. 3. Other eruptions greatly resembled those of pityriasis rosea. Lewandowsky, Kaufmann-Wolf, Alexander, Nicolau Fischer, Wiess, Arzt and others observed this form also. It also showed slight tendency to progress. 4. Another type was characterized by eruptions which were similar to trichophytosis with concentric circles. In this group may be included herpetic cases in which an abortive production of vesicles occurs eventually as described by Lewandowsky. 5. I also observed eruptions of the type marginé, the circumference of which was extremely "marginé," so that they bore a slight resemblance to the manifestations caused by *Trichophyton faviforme*. These were the most extensive eruptions observed by me and my co-workers; twice they were caused by *Epidermophyton rubrum*.

It is clear that gradual transitions between these forms may be observed. Other authors describe more forms. White and Greenwood saw a lichenoid and a purpura-like type. I believe that the lichenoid form is a type "eczématoide sive séborrhoide non marginé," slightly modified.

Since Kaufmann-Wolf's publication and especially since the war, eruptions of the hands and feet are of foremost interest. As a result of the progress of mycologic and etiologic research, several types of clinical aspect have been described; their etiologic relationships, however, are regarded differently. The reason for this is that in earlier years similar clinical types were described exactly by authors, but etiologic research was then less important. The clinical types are still accepted, because it is known that the diseases in question may be of mycotic, as well as of unknown or functional nature; the designations are identified from time to time with different clinical types. Another cause of differences in interpretation is the fact that the mycologic technics are imperfect, and that the fungi in question may be difficult to cultivate.

Comparing the different opinions of authors, I find that the majority acknowledge that in addition to dyshidrosis caused by fungi, there is

dyshidrosis from an unknown cause, or a whole group of artificial varieties of dyshidrosis due to fungi, chemical actions or internal causes.

The answers to the questions concerning epidermophytosis of the hands and feet were not numerous. The majority of observers mentioned that their answers were not based on cultural research. Pinkus of Berlin and Nobl of Vienna have not infrequently observed dyshidrosis or eruptions between the fingers and toes. The first author cultivated *Epidermophyton variabile* oftener than *Epidermophyton inguinale* or *Trichophyton*. Miescher of Zurich never found *Epidermophyton inguinale* as the causative fungus of dyshidrosis. In 1926, Keller of Freiburg saw seventeen cases of dyshidrosis in the majority of which *Epidermophyton variabile* could be cultivated and, more rarely, *Epidermophyton inguinale*. Arzt of Vienna cultivated *Epidermophyton inguinale* from a small number of cases. In 1926, Engelhardt of Giessen observed four cases of dyshidrosis of the hands and two cases of epidermophytosis of the feet in which *Epidermophyton inguinale* was the causative fungus. Takenouchi of Japan saw dyshidrosis of the palms in spinners. In 1926, I saw about thirty cases of dyshidrosis. A fungus was cultivated five times; *Epidermophyton variabile* was found three times, and *Epidermophyton inguinale* twice. In one case a generalized eruption of vesicles followed the primary manifestation, a real epidermophytide; eruptions were observed even on the face. *Epidermophyton variabile* was cultivated from all vesicles of this epidermophytide. Alexander also observed a dermatophytosis in a case of dyshidrosis caused by *Epidermophyton variabile*. I observed another case of epidermophytosis in which the eruption occurred on the back of the hand. From the eruption which resembled erosio blastomycetica superficialis, *Epidermophyton inguinale* was cultivated. I observed twenty-five eruptions on the feet, but *Epidermophyton variabile* was cultivated only once. In the other cases, which consisted of eruptions between the toes and hyperkeratotic conditions, yeasts were cultivated.

I believe that the cases in which eruptions occured on the hands from which it was impossible to cultivate a fungus were true cases of cheiropomphylyx Hutchinson. Low vesicles rose rapidly on the hands or feet or on both. Vesicles were situated on the sides of the fingers and progressed suddenly to the palms, or those on the feet progressed to the margins, more on the outer than on the inner areas. The contents of the vesicles, which were as large as peas, were watery; I have not examined the reaction of this fluid, since I believe that it is not important. Several authors, such as Fox, Nestarowsky and Sicoli, consider this disease in connection with the sweat glands or their excretory ducts, whereas Unna, Jarok, Gans and Sutton dispute this relationship. My biopsies indicate that there is no relationship.

A differential diagnosis between this true cheiropompholyx and dyshidrosis caused by fungi is, in my opinion, clinically impossible at the onset of a disease. Microscopic and cultural research is necessary. Perhaps it will be possible in the future to differentiate cheiropompholyx from dyshidrosis caused by fungi by the method of testing the function of the skin described by Groer-Hecht or by examination if the vesicles increase after the injection of pilocarpine.

I think that in every case the eruptions on the hands and feet are primarily vesicular. In later stages, the manifestations of a mycotic dyshidrosis rapidly change their aspect, and different types may result; the vesicles dry up or shrink in drying. White and Greenwood and Williams divide these different types into a macerated and a hyperkeratotic form. Besides pemphigus-like eruptions, Alexander observed combinations between circles and ring forms, and minute desquamations of the skin between the fingers caused by fungi. He described the "dyshidrosis sicca lamellosa," earlier observed by Porosz, and differentiated the two forms of this disease: namely, (1) the isolated dyshidrosis sicca lamellosa, and (2) a form combined with epidermophytosis on another extremity.

I have observed several cases of the first type: garland-like, superficial, localized, scaling eruptions were seen on the palms; the patients said that at first vesicles had suddenly appeared and soon dried up. The differential diagnosis between this disease and eczema tyloticum or keratodes fissurale was not difficult, because the manifestations were sharply circumscribed and because they did not show inflammation. In accordance with Alexander, Keller and Rajka, I was unable to cultivate or demonstrae fungi microscopically; nevertheless, I believe, that this form is of a mycotic origin; perhaps, the fungi have already disappeared.

As the last form of epidermophytosis, I shall mention infections of the nails. They are extremely rare. In answer to my inquiry, Dinkler of Archen said that he had observed only one case. Heller of Charlottenburg, who has had a wide experience with diseases of the nail, had observed only one case; attempts at culture were unsuccessful. Takenouchi of Japan said that he had observed many infections of the nail, but he did not mention cultural researches. Brunauer of Vienna described a case of generalized epidermophytosis with infection of the nails and cultivated *Epidermophyton inguinale* from the nails. I observed a similar case, from which I could cultivate the same fungus. Infections of the nails with *Epidermophyton* are, nevertheless, extremely rare.

The subject of therapeutics is too extensive to be covered in this paper. I will content myself by stating the principle followed in my clinic, which is not to overtreat the patient. Antimycotic remedies must

not be applied to such an extent that they produce eczematization. One must remember the view which Flaudin expressed at the first meeting of the French dermatologists, namely, that sensitization of the skin by fungi is of great importance so far as the disease may continue when the fungi have disappeared.

I wish to emphasize once more that my work has been an experiment to differentiate epidermophytosis from the large group of types of so-called epidermophytosis or parasitic eczema. I will make one more brief remark about one subject. A year ago, Scholtz published a paper entitled "Trichophytosis of the Glabrous Skin as a Clinical Problem," in which he warned against overvaluation of mycologic observations made in the laboratory, and in which he demanded more exact clinical descriptions, believing that the majority of cases of epidermophytosis are "typical cases." In consequence, the value of the microscopic examination of the scales in diseases of the skin is, in Scholtz's opinion, as unimportant as the demonstration of streptococci in cases of impetigo.

I believe that this idea is exploded. On the contrary, mycologic research in diseases of the skin must be increased. By that means it will be possible to obtain typical descriptions of these diseases for the practitioner. Clearly, such an international work is restricted to great laboratories of dermatologic research; the international collaboration of mycologists will be necessary, but collaboration of the practitioner who observes the cases clinically is also necessary. I hope that my paper has called attention to this need.

DISCUSSION

Dr. F. D. Weidman, Philadelphia: We should attempt to cure by killing the organism. Clinical experience has shown that many patients who appear to be cured have a recurrence; that is the complaint not only of the specialist, but also of the general practitioner. The hygiene of the problem is so complicated that I doubt whether the difficulty can be met by that route. It is impossible to sterilize all of the wearing apparel of the patient; even so, there would still remain the floor coverings in our homes, hotels, shower baths, etc. It seems to me that the real approach to the millenium in the way of treatment is to establish conditions in the intertriginous locations, in which the fungi work and mobilize, which will make these locations undesirable to the fungus. In the meantime, it appears that we shall have to worry along with the parasiticides, and whereas we have some that are satisfactory, we welcome others such as those that have been brought to our attention by the essayists.

Dr. T. Caspar Gilchrist, Baltimore: I think there is an epidemic following the war. We are astonished that so many common diseases, such as eczema, pomphlox and others, are probably due to fungus infection. Many of them were formerly considered due to internal causes, but are now known to be due to ringworm infection; we shall have many remedies that will help us out in these external rather than internal diseases. There are infections between the fingers and toes, which extend up the arms and legs, and which are due to the ringworm fungus. This was described by Sabouraud in 1904, and many variations have

been described since that time. Patients are cured, but come back later in as bad condition as before. Why? Because they have been reinfected, often by the use of golf clubs, umbrellas, clothing and other things. As Dr. Weidman said, we cannot burn down the house and boil the patient, and I think all physicians have a different remedy for ringworm. I wish to mention the vesicular form of ringworm. When mercurochrome-220 soluble is applied in these cases, it has a stimulating effect and makes the eruption spread more rapidly.

Dr. Harold N. Cole, Cleveland: I should like to ask Drs. Highman and Sharlit whether their preparation is the same as that known on the market under the name of cyanamide.

Dr. Howard J. Parkhurst, Toledo, Ohio: I wonder whether any one has found that thymol and oil of cinnamon are often irritating when applied in the recommended strengths of 5 per cent and 2 per cent, respectively. I have had that experience in my cases, especially with the oil of cinnamon, which I have finally abandoned. I find that the strength of the thymol solution often has to be reduced, and sometimes I have had to discard the use of this oil entirely.

Dr. Everett S. Lain, Oklahoma City, Okla.: This subject is one which interests every dermatologist. Even general practitioners are reading about the subject and calling on the dermatologists for more information, and are treating patients with these infections with more or less success. The resistance and frequency of the disease seem to vary somewhat with climate. I have recently reviewed more than 2,300 dermatologic cases of patients who came to our office during 1926; I found that more than 200 were cases of infections; about one third were proved microscopically. We do not make routine microscopic examination in every case, since the clinical manifestations are so obvious in many. In our practice, the epidermophyton infections are about 10 per cent of the total number of cases examined. We know that this organism grows best on the covered parts of the body where moisture and heat are more in evidence; also conducive to its growth is friction between the interdigital surfaces and in the inguinal region. We have tried every treatment that has been recommended. In 1925, after the recommendation of aromatic oils, we gave this treatment a fair trial, but we had the same trouble mentioned by Dr. Parkhurst; namely, extreme irritation, which caused us to abandon treatment with aromatic oil and thymol. We have fallen back on the treatment we had previously used for several years and have found it the most satisfactory; namely, salicylic acid, about 1 drachm (2.5 minims) to 1 ounce (28.35 Gm.) of 70 per cent alcohol. We apply this solution for a few days to produce rapid exfoliations, then we usually follow with Whitfield's ointment. When this is applied, we place gauze between the toes and fingers to prevent friction. This dressing has become a routine treatment in our office.

Dr. F. J. Eichenlaub, Washington, D. C.: Of 800 patients examined as a routine, about 43 per cent presented clinical evidence of ringworm infection, chiefly the interdigital type on the feet. Of this 43 per cent, about 25 per cent of the cases were complicated by ringworm elsewhere, such as tinea cruris and ringworm eczema. Regarding the use of mercurochrome-220 soluble the laity and the physicians in Washington use this commonly, and many of our patients have used the drug for a long time before consulting us. In my experience, it has been of little value.

Dr. Moses Scholtz, Los Angeles, Calif.: I am not qualified to discuss the subject from a bacteriologic point of view, but, irrespective of the clinical virtues

of the suggested remedy, as a clinician I would express an opinion that the clinical problem of dermatophytosis will not be solved by antiseptic and antimycotic specific drugs. It seems to me that the chemicals and formulas at our command at present, such as Whitfield's ointment, thymol and cinnamon and many others, are practically specific in their antiseptic clinical effect on accessible fungi. The clinical stubbornness and therapeutic resistance of epidermophytosis, in my opinion, is due essentially to latent potentialities and opportunities for reinfection and recurrent self-inoculation on the part of the infected person.

Until the clinicians direct their major efforts in this direction and institute a prophylactic and social educational campaign along the same lines, the clinical problem of epidermophytosis will continue to be unsatisfactory, in spite of the highest degree of efficiency of antiseptic local applications.

The second speaker has honored me by quoting extensively from my recent paper on clinical diagnosis of epidermophytosis, for the purpose of refuting the validity of its deductions. My paper was intended for the general practitioner, to give him aid and guidance in the clinical recognition of epidermophytosis. Far be it from me to decry the desirability of bacteriologic investigation, but I believe that clinical experience overwhelmingly demonstrates the possibility of diagnosing and handling a large majority of cases of epidermophytosis by clinical data alone. The clinical incidence and dissemination of epidermophytosis is so tremendous that it is safe to say that only in a small percentage of cases is a thorough bacteriologic examination feasible or possible. This undeniable fact renders justifiable, desirable and necessary the portrayal of clinical differential diagnostic traits and earmarks of epidermophytosis such as those offered in my quoted paper.

DR. JOSEPH MÜLLER, Holden, Mass.: I wish to take exception to Dr. Eichenlaub's statement that mercurochrome-220 soluble is of little value in these cases. Dr. White has used it most successfully and almost exclusively for some time. I started it at about the same time, and I have found mercurochrome to be more satisfactory than anything else. It was absolutely useless if I gave a bottle to the patient and allowed him to use it whenever he wanted to; but in the hands of the dermatologist who will not use it too frequently, I think it is more valuable than the other remedies. It is not irritating like iodine and the volatile oils, and seems to have a good action by exterminating the parasite. In some cases I found it necessary to clean and sterilize everything around the patient; it was necessary to have him change his clothes and shoes and to have all the floors thoroughly disinfected.

DR. WALTER J. HIGHMAN: I will request Dr. Sharlit to answer Dr. Cole's question, for I do not know the names of these things. It was not Dr. Sharlit's intention or mine to suggest a method of treatment that offered a final solution of the ringworm problem, but simply to offer one more line of attack when other methods had proved unsatisfactory. I would not say that the results of our investigations were in any way brillant except in the superficial cases; in these cases, of course, when the free, nascent iodine was able to reach the offending organisms, it was possible to destroy them. I avoid the word "cure" for it is bandied about too promiscuously.

The great difficulty in the treatment of patients who have tinea of the skin arises from the depth of the lesions, and unless they can be converted from deep into superficial lesions, this treatment, as all other, would be a failure. One of the ways that we have found efficacious in emptying these gesicles is to give a herterotonic salt bath to the patient twice a day. The treatment outlined can

be combined with other therapeutic agents or varied with other forms of therapy. Any antiseptic treatment consistently and intelligently applied will always be of value in some cases, but there will be a certain percentage of patients who will not respond to any treatment, and it is for those patients that we present the new prospect.

DR. HERMAN SHARLIT, New York: Replying to Dr. Cole, the preparation is made of a combination of iodine and methenamine. The tablet Dr. Cole asked about, contains, among other things, this preparation. It is given in an attempt to supply the necessary iodine.

Obituary

IRWIN COLEMAN SUTTON, JR., M.D.

1896-1928

Dermatology has to record the death of one of its prominent younger workers, Dr. Irwin Sutton of Los Angeles, who was stricken suddenly on January 25. He was an indomitable worker and had already established the fact that he was marked for a position in dermatology. One of his older colleagues, who had had an opportunity to appraise his worth, wrote of him as follows:

> To a profession that must cherish its youth, lest it have no ripe old age, this is a tragic loss. Sutton was the fortunate possessor of unbounded energy and an indomitable will to accomplishment. The obstacles he has surmounted, the chasms he has crossed on a thread, only those who have been his intimates will ever know. He had a marvelous, a surpassing pluck. He was fearless. He had too that double-edged gift, shall we call it, of inspiring love or hatred—there could be no middle course, and he numbered a host who love him. He was a giver of himself and his substance. Some of us will remember how, when the next meal was hardly in sight, a too thin arm in a too large sleeve hugged some gift book to his chest, to be handed, with an inimitable epigram, to one of the fortunate whom he admired.

Abstracts from Current Literature

ETIOLOGY OF GRANULOMA INGUINALE WITH REPORT OF EIGHTEEN CASES. M. F. CAMPBELL, Am. J. M. Sc. **174**:670 (Nov.) 1927.

Campbell believes that granuloma inguinale is not a venereal disease, no sexual transmission having been observed. He was unable to reproduce the disease experimentally in either animals or human beings by the injection of the intracellular bodies which were found almost uniformly in the lesions, thus not fulfilling all of Koch's postulates in determining the etiology.

STOVARSOL (SPRIOCID) POISONING: REPORT OF SIX CASES. W. L. BENDER, Am. J. M. Sc. **174**:819 (Dec.) 1927.

The reports of poisoning from the use of stovarsol are reviewed, and emphasis is laid on the possibility of poisoning as the drug is becoming more widely used in cases of amebiasis, malaria and yaws. Fever, skin eruptions and adenitis are frequently seen as characteristic of stovarsol poisoning, but discontinuation of the drug will cause prompt cessation of toxic symptoms. Detailed reports of six cases of poisoning are also given.

R. C. JAMIESON, Detroit.

OCULAR PEMPHIGUS. G. CONSTANCE, Am. J. Ophth. **10**:810 (Nov.) 1927.

A discussion is given of this subject with a report of three cases, one of primary pemphigus of the skin with secondary ocular involvement, one of general pemphigus with ocular manifestations and one of primary pemphigus of the eye. The prognosis regarding the eye is gravest in the primary ocular form. The condition is invariably bilateral and is characterized by xerosis, bullae, or ruptured bullae, essential shrinkage of the conjunctiva, dull atrophic cornea, and late conjunctival synechiae and adhesions. These cases were reported from the Mayo Clinic. The first two patients recovered under treatment; the last showed improvement.

FUNCTIONAL NERVE PALLOR WITHOUT FUNCTIONAL DISTURBANCES IN LUETICS. J. S. SOMBERG, Am. J. Ophth. **10**:837 (Nov.) 1927.

This paper is based on the ophthalmoscopic observations in more than 2,000 cases of paresis and taboparesis, embracing all types of cerebrospinal syphilis, studied at the Manhattan State Hospital over a period of two years. Four and three tenths per cent of these patients showed pallor of the optic disk and of these 60 per cent did not show functional disturbances for over a period of two years. The pallor of the optic disk was the sole prodromal symptom of a later developing optic atrophy in half of these patients. The author believes that when pallor of the optic disk occurs without functional change, there is involvement of the small vessels of the central connective tissue strand of the optic nerve. In the cases of primary atrophy the author believes the prime factor to be degeneration of the ganglion cells. The views of numerous authorities are cited.

POSSIBLE ROENTGEN-RAY KERATITIS. G. L. KING and G. L. KING, JR., Am. J. Ophth. **10**:843 (Nov.) 1927.

The patient had received eight treatments to the face for acne vulgaris and said that after each treatment marked swelling of the face and eyelids occurred. Almost four months after the treatment was instituted, conjunctivitis and photophobia developed. Examination showed a marked hyperemia of the

palpebral and ocular conjunctiva and keratitis of the deeper layers of the cornea without superficial roughening or ulceration. The roentgenologist is said to have covered the eyes during treatment though the patient, a nurse, stated that she had always been able to see the light in the Coolidge tube during the treatment.

No other possible cause of the condition than the roentgen ray was disclosed.

NEUROFIBROMATOSIS: EXHIBITION OF A CASE. W. ZENTMEYER, Am. J. Ophth. **10**: 849 (Nov.) 1927.

The patient had ptosis due to a neurofibromatous lesion in a portion of one lid.

SYPHILIS OF THE ORBIT. J. F. HARDERTY, Am. J. Opth. **10**:853 (Nov.) 1927.

An exhibition of a case with a discussion of the subject was given.

H. R. FOERSTER, Milwaukee.

CLINICAL RESULTS WITH EPHEDRINE THERAPY: A REPORT OF SIXTY-TWO CASES. T. L. ALTHAUSER and I. C. SCHUMACHER, Arch. Int. Med. **40**:851 (Dec.) 1927.

In this series, a few patients with urticaria and angioneurotic edema were treated, but the results were not such as to give great promise to this method of treatment. In one case of toxic erythema the patient showed spectacular results from the use of this drug.

R. C. JAMIESON, Detroit.

THE PENETRATION OF ULTRAVIOLET RAYS INTO LIVE ANIMAL TISSUE. D. I. MACHT, W. T. ANDERSON and F. K. BELL, J. A. M. A. **90**:161 (Jan. 21) 1928.

In experiments on laboratory animals, these investigators found that the penetration of ultraviolet light was greater than has hitherto been supposed. Some shorter ultraviolet rays penetrate more deeply than the longer rays. A marked difference was noted between living and dead skin. White human skin is more permeable to ultraviolet light than negro skin. Both the spectrograph and thermopile were used in this study.

TULAREMIA: REPORT OF TWO CASES IN AN UNINFESTED AREA. C. S. MCKEE, J. A. M. A. **90**:204 (Jan. 21) 1928.

McKee reports two cases of the disease occurring in Chicago in which the condition was traced to rabbits that were shipped from Missouri and Iowa. Tularemia should be considered in any case of unexplained intermittent fever.

LIGATION OF THE ANGULAR VEIN IN INFECTIONS OF THE UPPER LIP. C. A. ROEDER, J. A. M. A. **90**:272 (Jan. 28) 1928.

Roeder advises ligation of the angular vein as a prophylactic measure against septic thromophlebitis of the cerebral sinuses. Severe infection of the upper lip is a serious and often fatal disease.

PELLAGRA AMONG ALCOHOLIC ADDICTS. J. V. KLAUDER and N. W. WINKELMAN, J. A. M. A. **90**:364 (Feb. 4) 1928.

Klauder and Winkelman discuss the etiologic import of alcoholism in pellagra. In their series of 100 cases nearly all were chronic alcoholic patients, and the onset of the cutaneous disorder was directly associated with an alcoholic debauch during which little food had been consumed. The clinical picture of pellagra in these cases was similar to that found in patients who were temperate. The conclusion seemed warranted that alcoholism in many instances

played some rôle, either predisposing or etiologic, in the causation of pellagra in their cases. They failed to transmit pellagra to a monkey injected with blood and spinal fluid of patients with pellagra, supplemented by a minimum diet and the ingestion of alcohol. Pathologically, the "central neuritis" of Meyers, was found in every case of pellagra examined histologically.

DERMATOPHYTOSIS: THE NEWER RINGWORM. F. D. WEIDMAN, J. A. M. A. **90**: 499 (Feb. 18) 1928.

In an article designed for the general practitioner, Weidman presents the most important and practical aspects of this disorder. He considers Whitfield's ointment the most efficacious preparation for the intertriginous forms. Next in order in usefulness are iodine and chrysarobin.

OCCUPATIONAL SKIN DISEASE FROM EXPOSURE TO ROCK SALT AND WATER. F. THURBER, J. A. M. A. **90**:540 (Feb. 18) 1928.

Workers in ice cream plants often develop eczematous and furuncular lesions of the hands due to salt and water. Greasing the exposed parts is of value as a preventive measure.

MICHAEL, Houston, Texas.

THE QUANTITATIVE BIOLOGIC EFFECTS OF X-RAYS OF DIFFERENT WAVE LENGTHS. C. PACKARD, J. Cancer Research **11**:1 (March) 1927.

These experiments were performed at the Institute of Cancer Research, Columbia University, by radiating over 30,000 *Drosophila* eggs. The wave length range tests varied from 0.20 to 0.73 angstrom units, and the voltage from 95 to 30 kilovolts. The results showed that the quantitative biologic effects are the same for homogeneous roentgen-ray beams of different wave lengths and also for heterogenous beams provided the intensity is equal in all cases. That is, varying either the filter material or the voltage and maintaining a constant dosage produced identical results.

THE SURVIVAL CURVES OF CELLS UNDER RADIATION. J. C. MOTTRAM, J. Cancer Research **11**:130 (March) 1927.

The investigators from the London Radium Institute believe that living tissue cells do not react toward radiation in a peculiar manner, but that like living matter in general they react toward nearly all adverse environments.

The experiments also showed that if the dose of radiation required to kill the majority of cells was doubled, all were destroyed. The latter statement is apparently intended to refute the clinical impression that failures in radiation in cases of malignancy are due to the escape of a minority of highly resistant cells requiring large dosage for their destruction.

H. R. FOERSTER, Milwaukee.

ETIOLOGY OF OROYA FEVER: IX. BACTERIUM PERUVIAN, N. S., A SECONDARY INVADER OF THE LESIONS OF VERRUGA PERUANA. H. NOGUCHI, J. Exper. Med. **47**:165 (Jan.) 1927.

This organism was found in a subcutaneous lymph node in association with *Bartonella bacilliformis*, which it resembles morphologically, but it is markedly different in cultural and pathogenic properties. It is regarded as a new species, and it is possible that the two organisms are introduced into the body simultaneously by the same insect.

PROBLEMS IN VACCINIA VARIOLAE. M. COPLANS, J. Trop. Med. **30**:273 (Nov. 1) 1927.

A discussion is given of the protection afforded by vaccination, the susceptibility of the eye to vaccine and the type of vaccine used.

THE TREATMENT OF YAWS AND SYPHILIS WITH SODIUM AND POTASSIUM BISMUTH TARTRATE, COMPARED WITH THAT BY NEOARSPHENAMINE. C. R. STEEL, J. Trop. Med. **30**:274 (Nov. 1) 1927.

The patients treated by these two methods showed almost the same clinical improvement. In the majority of cases from 16 to 20 grains (1.04 to 1.3 Gm.) of the bismuth preparation was necessary for a clinical cure.

YAWS AND THE KAHN TEST. J. S. MAXWELL, J. Trop. Med. **30**:294 (Nov. 15) 1927.

In this preliminary report the author states his belief that the Kahn test is specific for yaws, negative reactions being obtained in all cases not yaws clinically or in which there was no history of yaws. In all cases of secondary yaws the reactions were positive, while all patients who had not had secondary yaws gave a negative reaction.

R. C. JAMIESON, Detroit.

DYSENTERIC AMEBA AND CUTANEOUS ULCERATIONS. L. TIXIER, M. FAVRE, E. MORENAS and C. PETOURAUD, Ann. de dermat. et syph. **8**:521 (Oct.) 1927.

Cutaneous lesions due to the ameba of dysentery have been considered as rare, occurring especially on the abdominal wall after the spontaneous or operative opening of amebic abscesses of the liver. The authors describe a perianal ulceration of six years' duration in a patient with chronic dysentery; treatment with emetine was rapidly successful. Histologic studies revealed the presence of microscopic abscesses involving the derma and epidermis, rich in amebas; colonies of amebas were found deep in the derma, apart from the surface ulceration. The history and laboratory observations, rather than the clinical appearance of the lesions, establish the diagnosis, which is important in view of the effectiveness of the proper treatment.

PIGMENTED DERMATITIS IN THE FORM OF RUNNING BANDS PRODUCED BY APPLICATIONS OF COLOGNE WATER. C. DU BOIS, Ann. de dermat. et syph. **8**:539 (Oct.) 1927.

The occurrence of this condition in a freshly sunburnt skin has been described in the German literature. Du Bois describes a case in a girl who was exposed to the Swiss mountain sun in April. The cologne water had been applied to both shoulders, but only the left shoulder had been exposed to the sunlight; the right shoulder remained unaffected.

BULLOUS LICHEN PLANUS. J. GOLAY, Ann. de dermat. et syph. **8**:543 (Oct.) 1927.

A case is described, with photographs and photomicrographs. Golay concludes that bullae may occur in severe cases of acute lichen planus, due to an exaggeration of the dermal edema. The roof of the bulla is formed by the upper portion of the epidermis rather than the entire epidermis. Their appearance is only partly due to trauma. The prognosis is good, but the hyperpigmentation is usually intense.

THE DIAGNOSTIC VALUE OF TRICHOPHYTIN. A. SLOIMOVICI and ALICE ULLMO, Ann. de dermat. et syph. **8**:554 (Oct.) 1927.

From observations in 148 cases of various parasitic and nonparasitic dermatoses, the authors conclude that the intradermal reaction to trichophytin is specific for the trichophytoses, and for them alone. It was found to be inconstant in more or less extensive cases of superficial infection, but always positive in the deep forms with a suppurative tendency, such as kerion and sycosis parasitica. The reaction was never positive in patients with pulmonary tuberculosis, and it was positive in only one of six cases of lupus vulgaris.

PSORIASIS AND TUBERCULOSIS. J. NICOLAS and F. LEBEUF, Ann. de dermat. et syph. **8**:601 (Nov.) 1927.

Getting away from the idea that psoriasis is a "healthy man's disease," the authors report their observations in a series of fifty-four psoriatic patients. In one third of these cases they found tuberculous lesions, cured or active, and ordinarily benign, or a tuberculous family history. In fifty-three cases, the sero-agglutination test of Arloing and Courmont was positive for tuberculosis, and in thirty-two the deviation of complement with the antigen of Besredka was positive.

LATE CONGENITAL SYPHILITIC GUMMATOUS RENAL APLASIA. L. CHATELLIER and C. LAURENTIER, Ann. de dermat. et syph. **8**:608 (Nov.) 1927.

The condition resulted fatally in a girl, aged 18. The observations at necropsy are given and the case is completely discussed, with stress on the similarity between congenital and acquired syphilis.

HUMAN MYCOSIS DUE TO A FUNGUS OF THE GENUS "HORMODENDRON: H. ALGERIENSIS NOV. SP." J. MONTPELLIER and A. CATANEI, Ann. de dermat. et syph. **8**:626 (Nov.) 1927.

The authors report a case of extensive nodular, ulcerative and vegetative involvement of one leg, of nearly ten years' duration, in a native Algerian, aged 60. The characteristics of the fungus are described, with drawings. The case was originally one of syphilitic and bacterial infection, but the superimposed fungus infection persisted after the first two conditions had been arrested by treatment.

A. DEVERGIE AS THE FIRST AUTHOR OF "CUTIS VERTICIS GYRATA." G. MESTCHERSKY, Ann. de dermat. et syph. **8**:636 (Nov.) 1927.

Mestchersky has found the condition described by Devergie in his book, "Traite pratique des maladies de la peau," published in 1854.

PARKHURST, Toledo, Ohio.

THE CYTOLOGY OF THE CEREBROSPINAL FLUID IN PATIENTS WITH SYPHILIS. P. RAVAUT and R. BOULIN, Ann. de dermat. et syph. **8**:681 (Dec.) 1927.

At the present time, enumeration of the cells in examination of the cerebrospinal fluid is considered sufficient for practical purposes. The authors question the value attributed to this simple procedure, stating that the method is inexact and that there is no definite line between normal and abnormal observations. These criticisms have greatest force in those instances in which the cells are in small number.

Ravaut and Boulin have studied the cells found in the cerebrospinal fluid by staining them with Pappenheim's stain after centrifugalization. They have recognized the following types: (1) free nuclei; (2) lymphocytes; (3) medium sized mononuclears; (4) large mononuclears; (5) plasma cells; (6) polymorphonuclear cells and (7) cellular debris. They described in considerable detail the cytology of these types, dividing some of them into several subtypes. This is followed by a discussion of the types of cells found in different stages of syphilis. Two differential formulas of particular importance were discerned. The first is characterized by an increase in the lymphocytes and the medium sized mononuclear cells with a few polymorphonuclear cells. The second consisted of the foregoing cellular types plus plasma and large mononuclear cells. The first formula denotes a simple superficial meningitis; the second, a more profound, parenchymatous involvement.

The authors conclude by saying that the cytologic study of the cells of the cerebrospinal fluid has great clinical value; the technic is simple, and the

information obtained gives an insight into the anatomic lesions obtaining at the time the study is carried out.

OUTBREAK OF PSORIASIS ON SUN-BURNED AREAS OF THE SKIN. O. JERSILD, Ann. de dermat. et syph. **8**:725 (Dec.) 1927.

A case is reported in which this disease appeared only on surfaces of the skin tanned by the sun. The case is of interest in view of the unsettled question of the influence of light and pigmentation on the development and course of psoriasis.

A GENERALIZED ERYTHEMATO-SQUAMOUS DERMATITIS CONSECUTIVE TO THE APPLICATION OF A PLASTER. P. VALETTE, Ann. de dermat. et syph. **8**:728 (Dec.) 1927.

Following the application of a plaster containing pitch and turpentine, a dermatitis developed, at first limited to the site of application but rapidly involving other regions. This cleared up in about two weeks. Two months later there was a marked defluvium capitis. The authors regard the eruption occurring at the site of application of the plaster as a dermatitis venanata, but the subsequent generalized outbreak is not so readily interpreted. Perhaps a latent microbic infection was awakened by the original dermatitis.

MICHAEL, Houston, Texas.

TWO CASES OF PRURIGO HEBRA MARKEDLY IMPROVED BY ANTISYPHILITIC TREATMENT. L. M. PAUTRIER and A. ULLMO, Bull. Soc. franç. de dermat. et syph. **34**:298, 1927.

Both patients had negative Wassermann, but positive Hecht, reactions. Amelioration, especially of the pruritus, was rapid following the institution of antisyphilitic medication. The authors think that evidence which points to the etiologic importance of syphilis in prurigo ferox is accumulating.

A CASE OF ERYTHEMA MULTIFORME WITH B. PERFRINGENS BACTEREMIA. L. BOËZ, Bull. Soc. franç. de dermat. et syph. **34**:300, 1927.

The author cultivated this anaerobic organism from a typical case. It has been found in the blood previously in severe sepsis only, but apparently a transitory, benign disturbance due to its presence in the blood may occur. A method for an anaerobic blood culture employing solid mediums is described, and its advantages are outlined.

RAPID CURE OF CRURAL ULCERS BY INSULIN OINTMENT. L. M. PAUTRIER and A. ULLMO, Bull. Soc. franç. de dermat. et syph. **34**:306, 1927.

Three large ulcers were cured in twenty days by the application of a salve containing insulin.

LEUKEMIDS IN A CASE OF LYMPHATIC LEUKEMIA. WOLF and GOUNELLE, Bull. Soc. franç. de dermat. et syph. **34**:785, 1927.

A man, aged 65, presented a polymorphic eruption, adenopathy and leukocytosis with a decided relative lymphocytosis. The skin lesions consisted of doughy infiltrations surmounted by bullae and papules. Sections showed dense collections of lymphocytes.

PAPULAR AND BULLOUS ERUPTION IN LYMPHOCYTOMA. L. M. PAUTRIER and A. DISS, Bull. Soc. franç. de dermat. et syph. **34**:786, 1927.

The cutaneous eruption in this case consisted of erythematous patches, papules, subcutaneous nodosities and bullae. There were transitory changes in appearance. The diagnosis was made by excision of a lymphatic gland. There was 20 per cent eosinophils in the blood, but leukocytosis was not present.

LICHEN PLANUS DEVELOPING UNDER THE ASPECT OF PARAKERATOSIS PSORIASIFORMIS. L. M. PAUTRIER and A. DISS, Bull. Soc. franç. de dermat. et syph. **34**:790, 1927.

The case presented the following unusual features: the condition began in some areas as a parakeratosis psoriasiformis; papules of the disease occurred on a nevus anemicus, and there was an associated lichen corneus hypertrophicus.

ACUTE OUTBREAK OF LICHEN PLANUS FOLLOWING THE INGESTION OF ARSENIC (ASIATIC PILL). L. M. PAUTRIER and A. DISS, Bull. Soc. franç. de dermat. et syph. **34**:797, 1927.

In a patient with a mild case of lichen planus, the administration of asiatic pills appeared to precipitate a severe outbreak of the erythrodermic form of that disease. There was a confluent lichen planus of the buccal mucosa.

GIANT CHANCRE, SIMULATING A GUMMA, OF THE ABDOMINAL WALL. J. RODERER and R. GLASSER, Bull. Soc. franç. de dermat. et syph. **34**:800, 1927.

The patient was presented because of certain diagnostic difficulties in his case. He had been treated for a chancre twenty-five years previously, and a Wassermann reaction a year ago gave a negative result. Neither Ducrey's organism nor spirochetes were found in the present lesion which had been treated locally. The patient developed a roseola and a positive Wassermann reaction while under observation. The clinical manifestations responded promptly to antisyphilitic treatment.

MILIARY LUPOID OF THE FACE OF TUBERCULOUS ORIGIN. L. M. PAUTRIER, Bull. Soc. franç. de dermat. et syph. **34**:802, 1927.

The presenter stated that this case forced a modification of his view of the etiology of miliary lupoid, which he had considered a variety of sarcoid, and probably of multiple etiology. After a study of this case he is inclined to approach the point of view of Schaumann, who stressed the tuberculous origin of the disorder. The patient presented small nodules disseminated on the face. Sections showed central caseation, epithelioid and giant cells. There was demonstrable pulmonary tuberculosis.

SUBACUTE PEMPHIGUS. L. M. PAUTRIER and A. WEIL, Bull. Soc. franç. de dermat. et syph. **34**:806, 1927.

The authors report a case of pemphigus which began on the buccal mucosa. Later lesions appeared in the axillae, on the face and in the genital region. In these areas the early appearance was that of pemphigus vegetans which later became transformed into the bullous type. The patient was dying nine months after the onset.

PURPURA HEMORRHAGICA APPEARING TWO YEARS AFTER A STREPTOCOCCIC SEPTICEMIA. WOLF and G. LÉVY, Bull. Soc. franç. de dermat. et syph. **34**:813, 1927.

The patient, who presented a purpura of moderate degree, had been treated by the presenters for a severe streptococcus septicemia two years previously. Blood cultures were negative at the present time.

SECONDARY SYPHILIS WITH A NEGATIVE WASSERMANN REACTION WHICH BECAME POSITIVE AFTER THE INSTITUTION OF ANTISYPHILITIC TREATMENT. L. M. PAUTRIER, G. LÉVY and A. ULLMO, Bull. Soc. franç. de dermat. et Syph. **34**: 815, 1927.

The reporters used this case as an argument against a slavish fealty to the result of a Wassermann reaction. The patient had flat condylomas, with negative dark-field examinations of these lesions, and repeatedly negative Wasser-

mann reactions. The clinical symptoms responded promptly to treatment with neoarsphenamine. Only after a second course of treatment did the reaction to serologic test become positive.

Bilateral Facial Paralysis Due to Neoarsphenamine. Lortat-Jacob, Fernet and Poumeau-Delille, Bull. Soc. franç. de dermat. et syph. **34**:833, 1927.

The authors' report concerns a patient with primary seropositive syphilis who received several doses of neoarsphenamine, which were followed by a transitory scarlatiniform rash and total facial diplegia. In addition, the auditory nerve was slightly affected. The authors believe that the specific infection in association with intolerance to neoarsphenamine produced the neurologic manifestations.

Granuloma Annulare Cured by Biopsy. Lortat-Jacob and P. Fernet, Bull. Soc. franç. de dermat. et syph. **34**:837, 1927.

In this instance, the disease disappeared after the removal of one lesion.

A Case of Kaposi's Sarcoma. Lortat-Jacob, Fernet and Poumeau-Delille, Bull. Soc. franç. de dermat. et syph. **34**:839, 1927.

A typical example of the disease is described.

A Solitary, Congenital Tumor with the Histologic Structure of von Recklinghausen's Disease. Lortat-Jacob, Legrain and Civatte, Bull. Soc. franç. de dermat. et syph. **34**:843, 1927.

In an infant, aged 4 days, a solitary tumor, of pseudophlegmonous aspect, was situated above the left iliac crest. It was incised under the mistaken idea that suppuration was present. Biopsy revealed its true nature.

The Treatment of Facial Hypertrichosis by Ionic Medication with a Thallium Compound. Louste, Juster and Dramez, Bull. Soc. franç. de dermat. et syph. **34**:849, 1927.

The authors tried this method in hypertrichosis and sycosis barbae. They failed to destroy the hair papillae, but state that the hairs in the treated area became thinner and less resistant to traction.

Two Cases of Lichen Planus with Zoniform Distribution. Louste, Du Castel and Juster, Bull. Soc. franç. de dermat. et syph. **34**:851, 1927.

In the first case the area supplied by the lumbar plexus, particularly the internal saphenous nerve, was affected. In the second case, the internal aspect of the right arm (first dorsal) and the upper part of the right side of the chest (second and third dorsal) was the site of the eruption.

Another Case of Melanocarcinoma in Which the Patient Was Treated by Electrocoagulation. Louste, Salmon and Calliau, Bull. Soc. franç. de dermat. et syph. **34**:852, 1927.

The authors presented a case of melanocarcinoma removed by surgical diathermy in which the immediate result was satisfactory.

Lichenoid Syphilids. Generalized Alopecia and Suppurative Cervical Adenitis. Jeanselme, P. Lefèvre and Y. Bureau, Bull. Soc. franç. de dermat. et syph. **34**:854, 1927.

A case of secondary syphilis in which these three conditions were present was reported. The authors thought that the adenopathy was probably of tuberculous origin, perhaps a latent infection activated by syphilis, but at the time of their report they had not completed the investigation of this aspect of the case.

LYMPHOCYTOMA "EN CUIRASSE" OF THE NECK WITH METASTASES. MILIAN and LONJUMEAU, Bull. Soc. franç. de dermat. et syph. **34**:859, 1927.

A case is reported of a vast, woody, infiltrating tumor of the neck with disseminated telangiectatic and nodular lesions. The appearance of the tumor was preceded by symptoms of the gastro-intestinal tract. Histologic examination showed marked fibrosis and lymphocytic infiltrating cells. The authors regard the cutaneous lesions as metastatic from a gastric tumor.

RETICULATED AND DIFFUSE PIGMENTATION DATING FROM CHILDHOOD. LAIGNEL-LAVASTINE and SÉZARY, Bull. Soc. franç. de dermat. et syph. **34**:863, 1927.

The patient, a girl, aged 20, had noted a brownish pigmentation of the skin since the age of 7. It was most marked on the abdomen. In some regions it was reticulated; in others it occurred in large patches. There was a slight hypothyroidism, but the authors reserve their opinion about its influence on the genesis of the pigmentation. A biopsy was unobtainable.

ERYTHEMATOUS ERUPTION FOLLOWING AN INJECTION OF ACRIDIN YELLOW. G. RIMÉ and Y. BUREAU, Bull. Soc. franç. de dermat. et syph. **34**:865, 1927.

In view of previous reports of eruptions due to this drug, the authors report a generalized erythematous eruption which occurred fifteen days after a single injection. The eruption was limited to the covered parts, in distinction to most previously reported cases, in which the limitation to the exposed surfaces suggested photosensitization.

THE TREATMENT OF LUPUS ERYTHEMATOSUS BY 4 AMINO-2 AURO-THEOPHENOL CARBONIC ACID. J. SCHAUMANN and K. HEDEN, Bull. Soc. franç. de dermat. et syph. **34**:867, 1927.

The present report comprises fifty-six cases of which twenty-six (46.4 per cent) were cured, twenty-eight (50 per cent) were greatly improved and two (3.6 per cent) were complete failures. Ten doses, in increasing amounts, were given in most of the cases. There were nine instances of dermatitis caused by the drug. The authors used neoarsphenamine in fifteen cases of the disease, and while it does not equal gold salts in efficacy, it is recommended for patients intolerant to the latter. They believe that small doses of gold compounds should be employed to guard against serious untoward effects.

AN ALLERGIC REACTION IN NICHOLAS-FAVRE DISEASE. M. KITCHEVATZ, Bull. Soc. franç. de dermat. et syph. **34**:874, 1927.

The author employed an allergen obtained from the pus from the suppurating lymph nodes. Intradermal tests with it in patients with the disease seemed to show its differential diagnostic value.

(The disease in this country is better known as benign lymphogranulomatosis. Abs.)

AUTOGENOUS VACCINE THERAPY IN NICHOLAS-FAVRE DISEASE. M. KITCHEVATZ, Bull. Soc. franç. de dermat. et syph. **34**:876, 1927.

The author obtained material by puncturing an affected gland. The antigen prepared from it was used in two cases of the disease with promising results.

ETIOLOGY OF NICHOLAS-FAVRE DISEASE: BACTERIOLOGIC STUDY AND COMPLEMENT-FIXATION TESTS. M. KITCHEVATZ and V. KITCHEVATZ-PETROVICH, Bull. Soc. franç. de dermat. et syph. **34**:879, 1927.

From one of four cases of this disease, a bacillus was cultured which the authors have studied. While making no definite claims for its pathogenicity, they think that further studies should be made, since immunologic reactions with it suggest a relation between it and the disease.

THE LATEX OF FIG TREES AND KERATOSES. HISSARD, Bull. Soc. franç. de dermat. et syph. **34**:883, 1927.

In the experience of Hissard the application of the fig latex has caused the rapid disappearance of senile keratoses.

POLYMORPHIC LEUKEMIDS AND CUTANEOUS LEUKEMIA (HISTOLOGY). L. CHATELLIER and R. SOREL, Bull. Soc. franç. de dermat. et syph. **34**:883, 1927.

The authors divide the dermal manifestations of leukemia into leukemids (nonspecific) and cutaneous leukemia (specific). They record in detail a case of lymphatic leukemia with polymorphic lesions of the skin. Two lesions were removed and studied histologically. One, an infiltrated placard showed a dermal infiltration composed almost exclusively of lymphocytes. The other, a papular element, showed the same infiltration though in less pronounced degree. While the histologic structure was the same, one lesion was a true cutaneous leukemia in its clinical appearance, and the other was a leukemid.

PARAPSORIASIS EN PLAQUES. L. DANEL, Bull. Soc. franç. de dermat. et syph. **34**:885, 1927.

A typical case of the disease is described. Intensive treatment with ultraviolet light led to disappearance of the patches in the treated areas.

ETIOLOGY OF BUCCAL PLAQUES, RESEMBLING LEUKOPLAKIA, NOTED IN NATIVES OF ASIA MINOR. TCHIPROUT, Bull. Soc. franç. de dermat. et syph. **34**:890, 1927.

The author thinks that tobacco, mechanical irritation and lime salts (from the water) are the cause of this frequent condition.

TWO FOCI OF MICROSPORON FELINEUM. A CASE OF ACHORION GYPSEUM INFECTION. RABUT and CANAL, Bull. Soc. franç. de dermat. et syph. **34**:891, 1927.

Two small epidemics of ringworm traced to domestic animals are recorded. In addition a case of achorion gypseum infection acquired from a dog is briefly described.

TRAUMATIC HERPES ZOSTER. R. BARTHÉLEMY, Bull. Soc. franç. de dermat. et syph. **34**:893, 1927.

A case of zoster is reported which followed an injury to the region on which the cutaneous disorder appeared.

EARLY CASES OF SYPHILIS RESISTANT TO TREATMENT WITH ARSENIC, MERCURY AND BISMUTH, BUT RESPONDING TO A GOLD COMPOUND. JEANSELME and BURNIER, Bull. Soc. franç. de dermat. et syph. **34**:895, 1927.

The patient had a chancre, followed by a roseola, which persisted despite treatment with neoarsphenamine, bismuth and mercury over a considerable period of time. The chancre and secondary eruption disappeared after the administration of gold and sodium thiosulfate, and the Wassermann reaction became negative. Spirochetes were demonstrable in the chancre up to the time of the administration of the gold compound.

ERYTHÈME ANNULAIRE CENTRIFUGE. BURNIER and A. MERCIER, Bull. Soc. franç. de dermat. et syph. **34**:896, 1927.

The eruption begins as small red papules, enlarging into annular or acriform lesions. It is generalized and pruritic. In the case which is reported here, the disease had resisted treatment for about eighteen months, but disappeared almost completely after several injections of bismuth. Favorable results from this drug have been reported in other cases of the disease.

MICHAEL, Houston, Texas.

VALUE OF SCHILLING'S HEMOGRAM IN INTERNAL DISEASE AND SKIN DISEASES. N. BOBROV and F. KOGAN, Arch. f. Dermat. u. Syph. **154**:33 (Dec. 27) 1927.

Bobrov and Kogan made hematologic studies in a large number of cases of skin disease, syphilis and soft chancre. The results are presented in two tables. The constant presence of eosinophilia of pemphigus and Dühring's dermatitis, its early appearance before the clinical picture is clear, the eosinophilia in fungous diseases, its absence in Gibert's pityriasis rosea and the monocytosis of early syphilis, which does not occur in soft chancre, are of diagnostic importance. The hemogram may also be of use in prognosis and in the control of treatment. In syphilis the regression of the monocytosis indicates, to a certain degree, the success of the treatment. In fungous disease, the decrease of the eosinophilia parallels the healing process; a stubborn eosinophilia speaks for the possibility of recurrence. It is probable that the sudden appearance of eosinophilia during treatment with arsphenamine is a forerunner of a dermatitis.

EXPERIMENTAL RESEARCHES IN THE ACTION OF IXODES RICINUS ON THE HUMAN SKIN. E. N. PAWLOWSKY and A. K. STEIN, Arch. f. Schiffs- u. Tropen-Hyg. **31**:574 (Dec.) 1927.

Pawlowsky and Stein injected separately into the papillary layer of the human skin emulsions of the salivary gland (unboiled and boiled), of the stomach and of the rectal bladder of the intestinal canal of *Ixodes ricinus (Ixodidae)*—the European castor bean tick. When injections of the unboiled emulsions of the salivary gland were made, a papule appeared on the skin accompanied by mild general symptoms. Injection of the other emulsions provoked only slight local inflammation. The investigators conclude that the principle of the toxic action of this tick on the human skin is located in the insect's saliva, and that it is thermolabile.

HYDROGEN ION CONCENTRATION IN THE BLOOD IN SOME INFLAMMATORY AND NONINFLAMMATORY DERMATOSES. T. PREININGER, Dermat. Wchnschr. **85**: 1679 (Dec. 3) 1927.

Preininger determined the hydrogen ion concentration of the blood in 100 patients with various dermatoses and in 10 normal subjects. In the latter, the values were between p_H 7.57 and 7.65. In psoriasis, the ratio of the number of cases presenting alkalotic values to those presenting acidotic values was 64:36; in the dermatitis group, the numbers were about equal on both sides; in the eczema group, the acidotic cases predominated in the ratio of 67.3:32.7. A few cases were followed during the process of healing. In four cases of psoriasis the p_H remained unchanged. In three cases of eczema, in which the patients were treated by turpentine according to Bloch, the p_H rose gradually after healing had occurred.

NINHYDRIN REACTION WITH ENDOCRINE GLAND EXTRACTS IN VARIOUS DERMATOSES. G. DÓCZY, Dermat. Wchnschr. **85**:1685 (Dec. 3) 1927.

Using Lüttge-Mertz's ninhydrin reaction, Dóczy tested the blood serum of a number of patients with various dermatoses against extracts of endocrine glands. The results in 120 cases of psoriasis vulgaris indicated insufficient function of the pituitary in 95, of the thyroid in 45, of the thymus in 40, of the ovaries in 40, of the suprarenals in 3, of the testes in 15 and of the corpus luteum in 5. In lichen ruber planus, insufficiency of the pituitary was shown four times, of the ovaries four times, of the thymus once and of the thyroid twice. Thyroid deficiency alone was found twice each in scleroderma and in hyperkeratosis, four times in pityriasis rubra pilaris and seven times in ichthyosis; suprarenal deficiency alone, in six cases of vitiligo and two of partial albinism; parathyroid plus testicular or ovarian deficiency, in two cases of Quincke's edema and eleven of urticaria.

TREATMENT OF PSORIASIS VULGARIS AND LICHEN RUBER PLANUS WITH ENDOCRINE GLAND PREPARATIONS. G DÓCZY, Dermat. Wchnschr. **85**:1708 (Dec. 10) 1927.

Dóczy treated 120 patients with psoriasis of various forms and four patients with lichen ruber planus with preparations of endocrine glands, on the basis of the ninhydrin test. As far as possible, he selected patients who had not been treated or who had proved resistant to chemotherapy and radiotherapy. Forty-six of the patients with psoriasis became free from symptoms, forty were much improved and in thirty-four the condition remained unchanged except that infiltration and formation of scales decreased. After the hormone treatment, twenty-seven of the patients described as improved or unimproved responded to chemotherapy and radiotherapy, which had previously been without effect, and became free from symptoms. Fifteen of the clinically cured patients had recurrences after from three to seven months; on repetition of the organotherapy, ten of these again became free from symptoms. Thirty-one patients have remained free from symptoms for from eight months to one and one half years. Three of the four patients with lichen ruber planus were cured (from six to twelve months without recurrence), one remained unimproved. Tests of the autonomic nervous system were made in twenty of the patients with psoriasis. In seventeen, the tests indicated sympathicotonia or vagotonia. The tests were repeated after the patients had become free from symptoms. In twelve, the condition was then found to be almost normal, and the remainder were much improved.

RESULTS OF SUFFICIENT AND INSUFFICIENT TREATMENT OF SYPHILIS AS SEEN IN THE CEREBROSPINAL FLUID. H. T. SCHREUS and V. NAPP, Dermat. Ztschr. **51**:321 (Dec.) 1927.

In a study of 332 cases, Schreus and Napp found that in the early stage of syphilis, 30 per cent of the untreated patients presented transient changes in the cerebrospinal fluid. During the late stage, the percentage of untreated patients with pathologic changes in the cerebrospinal fluid was 50. Of the treated patients with pathologic changes in the cerebrospinal fluid, a negative blood reaction had been attained in only 30 per cent. Treated patients with a positive blood reaction exhibited the same percentage of positive cerebrospinal fluid reactions as did untreated patients.

CARPENTER, Chicago.

STUDIES OF PIGMENTARY NEVI OF THE HUMAN SKIN (BENIGN MELANOBLASTOMATA). DR. A. KISSMEYER, edited by A. LEGRAND.

The author who spent some time in the year 1918 with Bruno Bloch in Zurich and who became initiated in his methods of studies of pigment by means of the "dopa reaction," has utilized this method in the Rigshospital in Copenhagen in his investigations of pigmentary nevi. The results of these investigations are given in this booklet consisting of 150 pages. After chronologically reviewing the literature on nevi in general, and especially on pigmentary nevi, and after acquainting the reader with the different theories regarding the origin of the "nevus cell," Kissmeyer illustrates how, by means of the dopa reaction, this question can be settled in favor of the epithelia theory first presented by Unna. As the presence of pigment is an important characteristic of the "nevus cell," his investigations on pigmentary nevi coincide with his research concerning the origin of pigment. By many sections stained by both the usual staining fluids and dopa (3, 4-dioxyphenylalanine), he proves convincingly that the nevus cells are originating from the pigment-forming epidermis cells, which give up their connection with the neighboring epidermis cells and are slowly eliminated from the epidermis into the corium. His investigations show that "lentigo," the flat, not infiltrated pigmented spot, which is so frequently present, forms the first stage of nevus formation, the second

stage is the "soft pigmented infiltrated nevus" (the elimination of the nevus cell group from the epidermis has been further progressed). The third stage forms the "papillomatous pigmentary nevus."

By his investigations concerning the origin of pigment, the author confirms the observations of Bloch that pigment is usually formed in cells of ectodermal origin, from which the nevus cell takes its origin. The cells of mesodermal origin, which are found forming the "mongolic spots" and "blue nevi" and which give also a positive dopa reaction are exceptions.

DAVID BLOOM, New York.

DERMATOLOGIC ABSTRACTS

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

ULTRAVIOLET RAYS AND VACCINE VIRUS: I. REACTION OF IRRADIATED SKIN TO VACCINE VIRUS. T. M. RIVERS, H. STEVENS and F. L. GATES, J. Exper. Med. **47**:37 (Jan. 1) 1928.

Rivers et al. found that rabbit skin treated for a few minutes with ultraviolet irradiations and then inoculated at once with vaccine virus is less susceptible to the action of the virus than is untreated skin. If twenty-four, forty-eight, or seventy-two hours elapse between the time of irradiation and inoculation, the treated skin appears to be more susceptible than untreated skin. Skin repeatedly exposed to ultraviolet rays is less susceptible to the action of vaccine virus than is nonirradiated skin.

ULTRAVIOLET RAYS AND VACCINE VIRUS. II. EFFECT OF MONOCHROMATIC ULTRAVIOLET RAYS ON VACCINE VIRUS. T. M. RIVERS and F. L. GATES, J. Exper. Med. **47**:45 (Jan. 1) 1928.

It was found by Rivers and Gates that the amount of energy required to kill staphylococci at single wave lengths in the active ultraviolet region was approximately the same as that necessary to inactivate vaccine virus.

ETIOLOGY AND PATHOLOGY OF PEMPHIGUS. J. A. LANFORD, Southern M. J. **21**:35 (Jan.) 1928.

Lanford's experimental studies and clinical observations have failed to disclose some causal agent in chronic pemphigus. He regards the ordinary microorganisms found in the cutaneous lesions and in the blood stream, and considered by others to have a possible etiologic significance, as being extraneous and secondary invaders. Microscopic studies of the tissues from the human being and experimental animal have not revealed any constant or significant lesions which might be considered characteristic of pemphigus. While the bleb of the human disease is the characteristic lesions, microscopically it does not differ from the bleb or blebs of a variety of other conditions. The failure to produce the bleb in the experimental animal with either the clear or purulent bleb content from the human being suggests either that the etiologic agent is absent or that the animal employed is not highly susceptible. It is Lanford's opinion, which is based on the clinical course in man and the experimental work carried out that the disease is most probably infectious and that the causal agent is a filter passer.

EXAMINATION FOR SPIROCHETES IN CHANCRE IN COURSE OF ANTISYPHILITIC TREATMENT. M. KITCHEVATZ, Ann. de dermat. et syph. **6**:473 (Aug.-Sept.) 1927.

The effects of treatment in twenty syphilitic chancres were followed. Clinical diagnosis was confirmed by dark field examination and on the same day the

patients received the first injection of 0.15 Gm. of neoarsphenamine. In general, the treatment consisted of one injection of neoarsphenamine and two injections of mercury a week. No local treatment was given. As a practical criterion of the disappearance of spirochetes, Kitchevatz established two negative examinations with a one-day interval. In thirteen of nineteen patients with syphilitic chancre, the organism was found from one to four days after an injection of 0.15 Gm. of neoarsphenamine; in six the second examination was negative. Of these six patients, one later gave a positive result. Examinations made at seven to ten day intervals might be of practical value for the recognition of resistant cases at the beginning of treatment.

PROLONGED INCUBATION OF SYPHILITIC CHANCRE. B. VALVERDE, Ann. d. mal. ven. **22**:678 (Sept.) 1927.

Valverde observed three instances of prolonged incubation of syphilitic chancre, one of sixty-eight, one of thirty-two and one of thirty-nine days. Two factors seem to explain prolonged incubation: the influence of prior antisyphilitic treatments, even simple prophylactic applications, and the condition of immunity conferred by heredosyphilis.

ACUTE RAPIDLY FATAL PULMONARY GANGRENE FROM NEOARSPHENAMINE. P. PAGÈS, Bull. de la Soc. d. Sc. med. **8**:395 (Sept.) 1927.

Pagès reports a case of acute pulmonary gangrene from neoarsphenamine, appearing in the course of treatment. This occurrence would seem to indicate that the theory of spirochetosal gangrene does not fit all cases; however, there may be an exaltation of the pathogenic power of the spirochete, as in syphilis.

RAYNAUD'S DISEASE. M. RONZINI, Policlinico **34**:1689 (Nov. 21) 1927.

In a case of spontaneous gangrene of the foot of Raynaud's type, treatment with arsphenamine (given intravenously) was followed by complete healing and subsidence of the pain. Even in the absence of signs of syphilis, it is worth while to try arsphenamine in such cases before resorting to the knife.

HERPES ZOSTER. G. PIERI, Arch. ital. di chir. **17**:545 (April) 1927.

In a case of intractable herpes zoster, removal of the corresponding spinal ganglion was followed by recovery. The cure is now of ten months' duration. Microscopically, the ganglion disclosed a chronic inflammatory process of a destructive character.

SYPHILITIC INFECTION FROM CADAVER. E. HOFFMANN, Deutsche med. Wchnschr. **53**:1501 (Sept. 2) 1927.

Hoffmann found only twenty certain, fourteen probable and four merely mentioned cases in the literature. In the twenty certain cases the chancre was nearly always on the finger (three on the index finger, four on the thumb, ten on other fingers). Once the primary lesion was on the neck. The course of the disease was usually severe. In three cases, there was malignant syphilis, in one early brain syphilis. Many of the infections were tardy. Infection is easiest from cadavers of congenitally syphilitic children and fetuses, rare from those of adults with early syphilis, exceptional in paralysis. The infrequency of infection from cadavers is due, apparently, to the early weakening of the virus, while the penetrative faculty of *Spirocheta pallida*, important for the ordinary infection, is reduced because of injury to its terminal filament and cortical substance. The greatest cleanliness and care are advisable in making necropsies.

Society Transactions

NEW YORK DERMATOLOGICAL SOCIETY

Regular Meeting, Oct. 25, 1927

JOHN E. LANE, M.D., *President, in the Chair*

DERMATITIS FACTITIA. Presented by DR. HOWARD FOX.

M. K., a stenographer, aged 17, said that the eruption first appeared on her left elbow about seven weeks before presentation. It had gradually increased in extent and severity. About the left elbow, almost entirely surrounding the arm, was a diffuse erythematous area with a moderate number of yellowish-green scars. In addition, there were a few smaller patches bordering the area and a small, single, somewhat linear-shaped red spot on the right arm. The borders were sharply demarcated, and the smaller patches were of irregular shape. The appearance was that of a burn caused by a chemical caustic. The patient also showed various stigmas of hysteria. A motive for malingering was not apparent, and the patient denied self-infliction of the injury.

LUPUS ERYTHEMATOSUS DISSEMINATUS. Presented by DR. HOWARD FOX.

T. M., aged 20, single, born in Italy, factory worker, came to the United States four years before presentation. She was seen by a colleague in April of this year, at which time there were butterfly-shaped lesions on the forehead and hands; they were erythematous, well defined, slightly scaly and had been present for five months. A diagnosis of lupus erythematosus was made. A routine Wassermann test was made and reported four plus by the New Jersey State Department of Health. She was then given two injections of arsphenamine and two of mercury, and developed an eruption which her physician considered an arsphenamine dermatitis. When seen a few weeks later, she was given sodium thiosulphate; this treatment was followed by improvement, although the original lesions were not affected. A second Wassermann test was made in a private laboratory with the Kolmer technic, the result being negative. She was first seen by the presenter on September 19, when she showed an extensive eruption on the face, a palm-sized area on the chest and a sparse eruption on the extensors of the arms, forearms and hands. It was reddish, dry, superficial and covered with fine adherent scales. In places the lesions were well defined; in others they faded gradually into the surrounding normal skin. There was well marked mottled pigmentation, especially of the forehead. In places there was apparent atrophy.

She had lost 15 pounds (6.8 Kg.) since the onset of the disease and felt extremely weak. The menses were irregular; she complained of sharp pains in the gastric region and frequent swelling of the feet. She had not been seen since September 19, and when presented after a period during which she had not been given any treatment, the eruption had largely disappeared. In the region of the manubrium was an area which showed some apparent atrophy.

DISCUSSION

DR. WHITEHOUSE: I thought it was a mild superficial type of lupus erythematosus and that it had nothing to do with neoarsphenamine medication.

DR. MACKEE: I thought that I detected evidence of atrophy, which would support Dr. Fox's contention of possible lupus erythematosus.

DR. HOWARD FOX: When I first saw the patient, she presented a classic case of lupus erythematosus disseminatus of an extensive type. I am not familiar with an eruption of that type due to neoarsphenamine, and rather doubt if the use of this drug had anything to do with the eruption.

SYPHILITIC INTERSTITIAL GLOSSITIS, WITH SERPIGINOUS ERUPTION OF THE MOUTH. Presented by DR. WISE.

W. L., a man, aged 57, denied ever having had syphilis and said his Wassermann test was negative when last obtained in 1921. He presented a sharply defined, slightly infiltrated, periorbicular lesion, affecting the skin adjacent to the vermilion border of both lips. When seen a week previously, this eruption simulated sycosis vulgaris. A single injection of bismuth altered the lesion to such an extent that the element of sycosis had vanished, giving place to a serpiginous syphilid. The patient had been treated as a case of sycosis with roentgen rays, but improvement did not result.

His tongue presented the typical lesion of chronic interstitial glossitis, with large areas of leukoplakia.

DISCUSSION

DR. KINGSBURY: I agree with the diagnosis.

DR. FRASER: I recall a case of interstitial glossitis in a woman, with an almost identical picture. What impressed me in that case was the rapid improvement following injections of bismuth.

DR. MACKEE: I have never seen a case of interstitial glossitis in which the condition improved rapidly, or improved at all, under vigorous antisyphilitic treatment.

PEMPHIGUS VULGARIS WITH VEGETATING LESIONS. Presented by DR. HOWARD FOX.

Mrs. F. M., aged 61, an Italian gentile, had come to the United States seven years before presentation. There was no history of any similar condition in her family. Previous to the onset of the disease, she had always enjoyed good health. The eruption first appeared in the mouth seven months prior to presentation. About five weeks later, the lesions about the navel and two weeks later those about the inguinal region appeared. While the patient was in a hospital at Port Chester, a diagnosis of Vincent's angina was made. Since the onset of the disease she had lost 40 pounds (18.1 Kg.) and had become extremely weak.

The patient had been seen once previously, about five weeks ago. At that time she presented raw, abraded lesions of the mouth — including the tongue, cheeks, palate and lips. In addition there were vegetating lesions about the navel and in the genitocrural region. The clinical appearance at that time was that of a pemphigus vegetans. Since then she had developed a fairly extensive bullous eruption of the face and back, suggesting an ordinary pemphigus vulgaris. A change had not occurred in the vegetating lesions. She had become emaciated and weak. The vegetating masses were reddish, the largest being the size of a hen's egg. The Wassermann test was negative, the urine showed nothing abnormal, and a histologic examination of the vegetating masses, made at Yale University, was said to have shown a simple inflammatory reaction. A differential leukocyte count showed 4 per cent eosinophils. Early in the course of the disease, according to her physician's statement, the patient had been given nine intravenous injections of neoarsphenamine without beneficial result.

DISCUSSION

DR. WHITEHOUSE: I think it is a case of pemphigus vulgaris. One can have these vegetations from a secondary infection.

DR. HIGHMAN: Do I understand that Dr. Fox makes a distinction between pemphigus vegetans and pemphigus with a vegetation? My understanding is that they are all alike and that any combination is possible.

DR. FRASER: Is there any good reason for the view that pemphigus vulgaris and pemphigus vegetans are separate pathologic entities? I agree with Dr. Highman's statement that they are probably clinical types of the same disease.

DR. MACKEE: Pemphigus vegetans has been known to remain localized with vegetating lesions for a long time and then change to either pemphigus vulgaris or septic pemphigus. I have always regarded pemphigus vegetans as a variety of pemphigus with characteristics sufficiently distinctive for a clinical entity; in other words, the term is used to designate a clinical type of pemphigus.

DR. HOWARD FOX: As the cause of pemphigus is unknown, I can only classify the different types according to the clinical appearance. This patient, when first seen, showed lesions of the mouth and vegetating masses about the navel and groin. At that time, a tentative diagnosis of pemphigus vegetans was made. Since my previous examination, the eruption has increased greatly in extent and has changed in character. All of the new lesions are ordinary bullae of pemphigus vulgaris. The diagnosis at present would therefore seem to be pemphigus vulgaris, associated with vegetating lesions.

PURPURA ANNULARIS TELANGIECTODES. Presented by DR. THRONE.

S. W., aged 26, was presented with a condition which occurred three years before presentation. The patient was shown last winter at the Brooklyn Dermatological Society, and the case was reported in the ARCHIVES OF DERMATOLOGY AND SYPHILOLOGY in the transactions of that society.

Pathologic report by Dr. Jessup was as follows: "Slight hyperkeratosis and acanthosis. Flattening of the papillae. Papillary and upper derma show marked increase of small blood vessels and capillaries, between which are many pigmented phagocytes. There is pigmentation of the basal cell layer of the epidermis, and scattered pigment — cellular and extracellular — all through the lower derma. The changes seem to correspond to the telangiectasia described by Majocchi."

After the administration of sodium thiosulphate the urine showed 0.066 mg. of arsenic per 100 Gm. of dried specimen.

DISCUSSION

DR. MACKEE: I think this is a case of either dermatitis hemostatica or Schamberg's progressive pigmentation, because of the varicose veins, the dermatitis, purpura and other factors; in other words, the polymorphic eruption. I do not think it is a case of purpura annularis telangiectodes because that disease is not progressive, but consists of exacerbations and remissions.

DR. WISE: My impression, after a careful examination, is that it is a type of hypertrophic lichen planus. There is some elevation of the area and considerable hypertrophy and thickening of the lesion, with hyperpigmentation. If it were Majocchi's disease, one would expect to find a hyaline degeneration of the blood vessels, which was not mentioned in the pathologic report.

DR. HOWARD FOX: It seems to me that the duration of three years would rule out the diagnosis of purpura annularis telangiectodes. The disease is a self-limited one, ordinarily running its course in three months.

DR. WHITEHOUSE: I also thought that Majocchi's disease could be ruled out because of the duration. At first I was inclined to consider it a hypertrophic lichen planus on account of its hemorrhagic character; however, I should rather incline to dermatitis hemostatica, as Dr. MacKee has suggested.

DR. BECHET: I am inclined to agree with Dr. Whitehouse. I could not see any papules sufficiently raised to warrant the diagnosis of Majocchi's disease. The whole lesion is hemorrhagic.

DR. THRONE: The question of the diagnosis was always, to my mind, doubtful. At first sight the case impressed me as a hypertrophic lichen planus. The presence of the amount of arsenic shown in the urine should possibly be considered.

EPITHELIOMA OF THE PERINEUM. Presented by DR. WISE.

A. H. W., a man, aged 34, had been afflicted with sycosis barbae and an almost generalized folliculitis of the hairy portions of the body for fourteen years. He had received a number of roentgen-ray treatments in doses of 0.25 skin units during the past ten years, at various intervals. He presented an alopecia of the genital area, the pubes and axillae, but visible evidences of "x-ray skin," that is, telangiectases and atrophy, were not present. On the buttocks, however, was a mottled pigmentation, presumably due to radiation. There were no telangiectases on the buttocks or perineum. On the perineum, midway between the scrotum and anus, was an indurated ulcer, about 1¼ inches (3.17 cm.) long and 1 inch (2.5 cm.) broad, with sharply defined elevated edges and rolled borders. The interior of this lesion was glazed and dry in appearance. The patient said he had been in the habit of scratching the perineum "for years," and presumably the epithelioma resulted from constant irritation and not as the result of irradiation. There was a moderate adenitis of the glands in both groins. Signs of "x-ray skin" were not present in the perineal region or on the raphe.

DR. MACKEE: I do not think the epithelioma is due to antecedent roentgen-ray treatment. Evidence of injury of this kind, such as atrophy, telangiectasia and keratosis, is not present.

DR. FRASER: I agree with Dr. Wise in his assumption that the lesion is an epithelioma of the squamous cell type, but it is in a rather unusual location.

DR. KINGSBURY: A lesion of that character in that location in a patient who is so young as he and who has had so much roentgen-ray treatment would seem to indicate that the condition in the buttock was likely caused by the roentgen rays.

DR. WISE: After questioning the patient closely, I have come to the conclusion that the epithelioma is not related to the roentgen-ray exposures but that it is due to four years of scratching and irritation. The man had an ordinary infection, and the lesion degenerated into an epithelioma as a result of constant trauma.

DR. WHITEHOUSE: The relationship between the epithelioma and the roentgen ray is a matter for discussion. I have never seen an epithelioma after roentgen-ray treatment in which there was not some distinct evidence of roentgen-ray burn. I think the man has pigmentation resulting from roentgen-ray treatment, but I would say that the epithelioma was not due to the roentgen-ray exposure.

A CASE FOR DIAGNOSIS (ABNORMAL HAIR GROWTH). Presented by DR. RULISON for DR. SCHWARTZ.

J. S., a Russian Jewess, aged 19, born in New York, was admitted to the clinic on July 15, 1927. She had always been well until four years before admission to the clinic, at which time she had an attack of influenza. Following this illness, her weight increased from 120 to 162 pounds (54.4 to 73.5 Kg.), and this was accompanied by severe headache and by loss of hair over the vertex. The loss of hair was diffuse, and bald patches were not present. The hair on the top of the head, as presented, was about half an inch long, dry and easily broken. The hair around the lower part of the scalp was moderately oily, grew at a normal rate and had an entirely different appearance from the hair at the vertex.

The patient was a well developed, thick-necked, obese girl, with fat generally distributed. The lower part of the face was wide, and the eyes lacked expression. The pupillary reaction was normal. The nose and ears were normal, and the teeth were in good condition. The tonsils had been removed. Glandular enlargement was not found. The chest, heart and abdomen were normal. The fingers were short and fat, and the skin was moist and soft. Cursory examination of the nervous system gave only normal reactions.

On August 2, the patient's weight was 173 pounds (78.5 Kg.). A determination of the basal metabolism had been made since the previous visit, and the rate was found to be 8.9 per cent. A roentgenogram of the pituitary region showed the following: "The sella is of unusual depth, but the posterior and anterior clinoid cells approach each other. There is no evidence of bone absorption. Otherwise, the bones of the skull appear negative."

The patient was then given 0.1 grain (0.006 Gm.) of thyroid nucleoprotein, twice daily. The following week treatments with the ultraviolet lamp were instituted and continued at weekly intervals until the end of September. Both the patient and the attending physicians thought that there had been some improvement in the amount of normal hair.

The case was presented as showing a postinfluenzal abnormality of hair growth, possibly the result of some disturbance of glandular function initiated by influenza.

DISCUSSION

DR. HIGHMAN: I think the girl now has myxedema or something so closely related that it might be called that. If she is given some thyroid substance, the growth of hair will return to normal.

DR. WHITEHOUSE: That was my idea. I do not think that a condition of ordinary alopecia improves as this has; the hair generally grows uniformly. Furthermore, a person with this condition should improve in less than four years, and the whole aspect of the patient seems to suggest myxedema. I do not see why there is long hair on the lower part of the scalp or why the lack of nutrition is limited to the calvarium and sides of the head.

DR. RULISON: Of course, the patient looks like a myxedematous person. She has gained about 40 or 50 pounds (18.1 or 22.7 Kg.) during the last year. She is presented because the basal metabolism is within normal limits, the hair is natural on the base of the scalp, the change being only on the vertex, and the skin is fine, not showing myxedematous change. She has been on thyroid treatment for about two months, and while she insists that she is improving, she has gained weight. I cannot see any marked improvement. If it were a case of myxedema, one would expect a lower basal metabolic rate.

LUPUS ERYTHEMATOSUS. Presented by DR. THRONE.

Sophie B., a Jewess, aged 12, visited the Skin and Cancer Hospital on Aug. 14, 1922. At that time she was 7 years of age and showed a rash on the forearms and face. The rash on the forearms was lichen planus. On the face it covered the area of lupus erythematosus and simulated that condition. It had been present for two weeks and had developed after sunburn. The rash disappeared in a few weeks. The condition on the face cleared up with the onset of cold weather. It reappeared the following summer and went through the same process. The next summer it reappeared and had been present ever since.

The rash consisted of a lupus-like eruption on the nose and cheeks. It showed telangiectasia, pigmentation, dilated follicles and some scaling, which was most marked on the outer parts of the cheeks. Small, whitish granules simulating milia were present. There was thinning of the skin and possibly atrophy in some places. On the chin and lower parts of the cheeks rounded, pigmented lesions with thinned centers and borders showing small lichenoid papules had developed during the last year.

Biopsy report (Dr. D. S. D. Jessup) on July 11, 1927 was as follows: "Section shows a focal infiltration beneath the atrophic epidermis. The infiltration has obliterated the rete pegs entirely. The follicle openings are filled with horny plugs. The Malpighian layer has only from three to five layers. The basal cell layer is distorted by the edema in the underlying corium. The edema is most intense in the infiltrated area. The infiltration consists of lymphocytes

and is not in relation to the blood vessels. Pigment is scattered throughout the corium and epidermis. Weigert stain shows coarse elastic fibers. Diagnosis: Lupus erythematosus."

On July 22, 1927, the patient was given 0.025 Gm. of a gold compound. This was repeated on August 24 and 29. On September 2, she complained of pruritus. An examination of the blood on that date showed a sugar content of 126 mg., and a chloride content of 471 mg. in 100 cc. of blood. She was then given 0.5 Gm. of sodium thiosulphate intravenously, three times a week. On September 19, the blood sugar had decreased to 101, and the injections of a gold compound were resumed in doses of 0.025 Gm. twice a week. She was beginning to show improvement. On October 14 her blood showed a sugar content of 111 and a chloride content of 471 mg.

DR. FRASER: The clinical picture favors lupus erythematosus. It is impossible to make a definite diagnosis from the slide presented, but my impression is that the histologic picture favors the diagnosis of the superficial type of lupus vulgaris (Leloir) rather than lupus erythematosus. The age of the patient and the failure to respond to gold therapy speak against lupus erythematosus.

DR. MACKEE: I am unable to make a diagnosis without further study. The location of the eruption and the absence of nodules favor lupus erythematosus. The age of the patient is, of course, somewhat in favor of lupus vulgaris. The cellular infiltration shown in the microscope does not seem to be sufficiently polymorphous for a granuloma. I am aware of the fact that pathologists have broadened their conception of granuloma so that it is now difficult in many instances to differentiate between some types of inflammation and granuloma. I am also aware that there is a superficial type of lupus vulgaris that resembles lupus erythematosus. I would like to see the patient again and would also welcome the opportunity to study more than one microscopic slide.

DR. TRAUB: The eruption seemed to correspond to lupus erythematosus. The interesting point was the numerous milia that the patient showed which, as the presenter said, suggested the possibility of confusion with adenoma sebaceum.

DR. WISE: I think the diagnosis of lupus erythematosus on clinical grounds is justified.

DR. HOWARD FOX: The suggestion of Dr. MacKee that it may be necessary to study more than one piece of tissue in order to make a positive diagnosis is well taken. This was shown in a case of lupus vulgaris erythematodes (Leloir) which I presented before this society. Histologic studies had been made by a pathologist from Montreal who did not find any evidence of tuberculosis and made a diagnosis of lupus erythematosus. Another biopsy was made and a few small but unquestioned tubercles were found, establishing the diagnosis of lupus vulgaris. Dr. Fraser, who made the sections, will recall the case.

DR. THRONE: I am glad that the case has brought out so much discussion, as I have been watching it for five years. Rosacea can be ruled out, as this condition began when the child was 7 years of age. From the therapeutic standpoint the evidence against lupus erythematosus is the slowness of the patient's response to gold therapy. My experience has been that in lupus erythematosus treatment with a gold compound is specific, but in tuberculous conditions I have never been able to obtain any results from it.

A CASE FOR DIAGNOSIS (SYPHILIS). Presented by DR. RULISON for DR. SCHWARTZ.

Miss B. S., aged 51, born in the United States, had had sciatica eight years before presentation; otherwise she had been well. Eight months before presentation she developed a nonerythematous swelling which was tender but not

painful; other tumors developed at intervals. She was said to have a high blood pressure and a rheumatic heart. The last lesion appeared at the base of the thumb six weeks before presentation. Following irritant applications, the tops of all these swellings became a dusky red.

DISCUSSION

DR. WISE: The general appearance makes me think it is a syphilitic gummous process. It resembles the lesions called juxta-articular nodules, excepting that in that condition the outlying skin appears to be normal, while here it is inflamed.

DR. TRAUB: The unilateral eruption of rather firm, reddish-brown nodules with a tendency to crescentic configuration suggests a late syphilitic lesion. The nodules apparently involve only the derma and subcutaneous tissue.

DR. WHITEHOUSE: I was inclined to think it was syphilitic.

DR. HOWARD FOX: The condition under discussion has been described as chronic fibroid syphiloma. This occurs most often on the elbows and knees as firm tumors, generally covered by normally colored skin. They are gummas with a good deal of fibrous tissue, but they slowly yield to antisyphilitic treatment. Such cases have been reported by Parkes, Weber, Goodman, myself and others. Goodman spoke of his case as resembling the so-called juxta-articular nodules seen in the Far East. It is possible that the lesions in this case could be classed as fibroid syphilomas. I could not see any close relationship to the tendons.

DR. RULISON: It is unfortunate that the patient came to the clinic only yesterday, but the case was presented because the condition was considered unusual. In presenting the case I did not offer any diagnosis but merely made the statement that I was inclined to think that the lesions were connected with the tendon sheath, and in spite of the difference of opinion, I still think that the lesions are in some way connected with the tendons. Dr. Fraser and others looked at it, and they thought it was either syphilitic or tuberculous. The woman has been applying numerous irritants to the lesions for some time, but she has said repeatedly that when the first lesion appeared the overlying skin was normal, so that the erythematous condition may be due to the applications she has made.

DR. LANE: I do not feel sure that these lesions are connected with the tendons. My impression is that the lesions are syphilitic, probably ordinary gummas which have not yet broken down. Two other possibilities occurred to me: one, that they may be fibroid nodules somewhat like the juxta-articular nodules seen about the elbows; the other, that the lesions may arise from small bursae, in which case they might be classed as syphilitic bursitis of Verneuil. I do not think that the possibility of either is great, as both of the lesions just referred to are rare, and this would be an extraordinary location for either of them. The fact that there are several lesions is also a point against their belonging in either of these two classes.

DR. MACKEE: Bursitis occurs as a single lesion in any one location. Lesions may occur in various parts of the body, but there is never any grouping. In this case there are several lesions, grouped so as to suggest an annular configuration. I think it is a syphilitic lesion possibly of the fibroid type.

A CASE FOR DIAGNOSIS. Presented by DR. TRAUB.

J. L., a Jewish clerk, visited the Skin and Cancer Hospital complaining of redness and swelling of the nose, of about eight weeks' duration. About ten years before presentation his nasal septum had been removed, and shortly thereafter he had sustained a crushing injury to his nose, which was repaired by some form of plastic surgery or by injection of some drug.

When the patient was presented, there was no lesion in the nose, nasopharynx or palate. The nose was markedly swollen and bright red. On palpation, several distinct nodules or lobulated masses could be outlined which were definitely not connected. Evidence of pus was not present, nor was there a history that pus had been discharged from the lesions. The Wassermann and tuberculin tests were negative.

DISCUSSION

DR. WHITEHOUSE: From its consistency and position I do not think it is rhinoscleroma; it has not the stony hardness of rhinoscleroma. At first I did not think it was paraffinoma but, as some one pointed out, it does sometimes remain for a long time without giving trouble, and I now incline rather to that diagnosis than to any other.

DR. HOWARD FOX: I agree with Dr. Whitehouse except in regard to his statement concerning the consistency of the lesion. In places it was as hard, in my opinion, as true rhinoscleroma. As this disease is rare in this part of the world, and as the patient gave a history of some cosmetic work on his nose, the diagnosis of paraffinoma or foreign body would seem reasonable.

DR. KINGSBURY: As Dr. Fox said, the lesion is hard and lobulated, which is entirely contrary to the nature of rhinoscleroma.

DR. HIGHMAN: There are four possible diagnoses, any of which might be valid — rhinoscleroma, paraffinoma, tuberculosis and syphilis — and only further study will decide which is correct. One should also consider gangosa, out of deference to the textbooks, although no one here has ever seen a case of that kind.

DR. TRAUB: I will try to report on the case later.

SYPHILITIC GLOSSITIS AND LEUKOPLAKIA, WITH NODULES ON THE TONGUE SUGGESTIVE OF EPITHELIOMA. Presented by DR. WISE.

T. K., a farmer, aged 61, when seen at the Post-Graduate Skin Clinic, said that he had had a sore on the penis and a rash on the body. One and a half years prior to presentation, he noticed white spots on the tongue. He had been married twenty-three years, and had three boys living and well, aged 19, 17 and 13, respectively. His wife had had three self-induced abortions. Physical examination showed a glossy smooth atrophy of the dorsum of the tongue with well developed areas of leukoplakia. There was a well advanced interstitial glossitis. On the right border of the tongue was a pea-sized nodule suggesting a pre-epitheliomatous change. In the right submaxillary region was a palpably enlarged soft gland.

DISCUSSION

DR. FRASER: The main condition is leukoplakia, and in my opinion that nodule is not carcinoma. The growth is well defined and has not infiltrated the surrounding tissue. It is probably a benign papilloma.

DR. ELLER: I agree that the condition is probably not epithelioma of the tongue. The enlarged axillary gland is probably inflammatory.

DR. KINGSBURY: The condition of the gland is probably dependent on the teeth.

DR. WHITEHOUSE: I agree with Dr. Fraser; the pea-sized lesion is not hard, but a rather superficial lesion. I cannot explain the indurated lymph node remaining free from an inflammatory process for so long. The patient should be watched carefully, for later malignant tumors will probably develop.

DR. LANE: I agree with with Dr. Kingsbury that the condition of the gland may have been due to abscessed teeth and that one cannot tell whether or

not the lesion on the tongue is an epithelioma. Dr. Wise is to have it removed and examined.

DR. WISE: The papule on the tongue is not an epithelioma. It was shown as a lesion which might possibly develop into epithelioma later if neglected; therefore I advised that the lesion be excised and examined microscopically.

LEPROSY. Presented by DR. HOWARD FOX.

P. C., a porter, aged 26, born in the Island of Malta, had been in the United States for the last three years. While the patient presented unmistakable evidence of leprosy, he also gave a history suggesting the possibility of an added infection with syphilis. Eighteen months prior to presentation, there were three areas on the glans penis which disappeared in six weeks under both local and internal treatment. Three months later, the eruption appeared and became generalized within two months. The Wassermann test was strongly positive, and the patient had received antisyphilitic treatment for the past ten months.

The symptoms of leprosy included a generalized, rather sparse, macular eruption, the patches being yellowish red with a slight tendency to annular configuration, and with varying degrees of anesthesia. The backs of the hands showed thickening, pigmentation and wrinkling; the lobes of the ears were thickened, and there was an apparent enlargement of one ulnar nerve. Histologic examination showed the presence of lepra cells but bacilli were not in evidence.

DERMATITIS HERPETIFORMIS AND SOLID EDEMA. Presented by DR. MALONEY.

F. N., a man, aged 42, born in Japan, admitted from the University and Bellevue Clinic presented a hard swelling in either cheek about the size of a tennis ball. The swelling first appeared in the left cheek twelve years prior to presentation, following an infection of a tooth which was extracted without producing any appreciable result. Later the mass was removed surgically by Dr. Crile of Cleveland. Three years afterward, both cheeks began to show masses which slowly increased to the present size.

The patient also presented a papulovesicular, somewhat crusted eruption on the back, chest and extremities. This eruption had existed for ten months and was itchy. There was little tendency to grouping of the lesions, but there was a considerable number of pigmented spots where old lesions had been.

DISCUSSION

DR. ELLER: I think that any irritation might cause an urticarial manifestation in an irritable skin such as this patient has.

DR. MALONEY: The urticarial condition is new, as today is the first time that I have seen it. The patient was stripped Saturday and urticaria was not present then. He has had three treatments with the Grentz ray by Dr. Bucky himself, and I think that this is entirely apart from the condition itself and from the treatment.

A CASE FOR DIAGNOSIS (PARAPSORIASIS ?). Presented by DR. RULISON for DR. SCHWARTZ.

A. N., a man, aged 37, had had a dry scaling skin with violaceous hypertrophied areas on the right ankle for twenty-seven years. Numerous scars of past ulcerations were present, and numerous red and erythematous patches were found on the thigh. Physical examination had been negative, and examination of an incised area failed to substantiate the original diagnosis of chronic lichen planus, showing only a slight hyperkeratosis and round cell infiltration.

DISCUSSION

DR. WISE: I think the diagnosis lies between parapsoriasis and poikiloderma. I thought that the latter diagnosis might be justified by the presence of the telangiectasia on various portions of the body, most marked on the right knee. The areas of erythema, the follicular excrescences and the chronicity were the points in favor of that diagnosis, as well as the general distribution of the lesions and their polymorphous character.

DR. MACKEE: I thought of the two conditions mentioned by Dr. Wise and also of the possibility of arsenical dermatitis. In this connection, I have seen arsenical dermatitis last for a year or two and resemble pityriasis rubra pilaris. I also thought of acrodermatitis or atrophia cutis preceded or accompanied by erythema. The eruption is too complicated and too polymorphous to permit a diagnosis on casual inspection. The telangiectasia, atrophy and erythema point to the possibility of poikiloderma, a disease all the manifestations of which are probably not yet known.

DR. TRAUB: The patient said that itching was not prominent. Lichen planus papules were not present, although lichenification in patches was a marked feature. The most probable diagnosis seemed to be parapsoriasis.

DR. LANE: If the condition is poikiloderma, it has one feature which has not been described in any previously reported case, the lichenoid lesions on the wrists.

DR. RULISON: I am grateful for the suggestions. The lesions are so polymorphous that I have been undecided concerning the diagnosis. On the front of the elbow the lesions, aside from their color, are almost typical of lichen planus; the violaceous lesions on the ankle also suggest lichen planus. Then there are the large areas of erythema and numerous scars and active ulcerations. I shall study the condition intensively and report on it later.

EPITHELIOMA (EXTENSIVE) REMOVED BY ENDOTHERMY. Presented by DR. ELLER.

The patient was a man, aged 63, from The Post-Graduate Hospital, who on July 11, 1927, presented a spongy-like tumor on the right side of the nose and cheek. It had been present five years and had grown gradually until it was about 3 inches (7.62 cm.) in diameter and was raised over half an inch. It involved the entire right side of the nose, the nasal cartilage and part of the cheek.

The tumor was removed by the use of the endotherm knife; part of the cartilage was also removed by the same method. The base was electrocoagulated, curetted and electrodesiccated. On the same day, the involved area was given an intensive dose of the roentgen-ray treatment filtered through 1 mm. of aluminum. This treatment was repeated six weeks later. A microscopic study of the removed tissue showed basal cell epithelioma.

The case was reported to show the cosmetic result.

All the members agreed that the result was excellent.

MULTIPLE HEMORRHAGIC SARCOMA OF KAPOSI. Presented by DR. RULISON for DR. SCHWARTZ.

J. G., a Russian Jew, aged 61, two years previous to admission had developed a bluish, raised lesion at the base of the toes on the dorsum of the foot; other lesions had developed at intervals. When the patient was admitted to the clinic, lesions were present on the feet, legs, hands, arms and trunk. Some were brownish, some a deep violet and some were red.

Microscopic examination of a biopsy specimen showed chronic inflammation, but nothing characteristic of Kaposi's sarcoma.

The patient had received three roentgen-ray treatments, one to the right foot, one to the left ankle and one to the left foot. Improvement had been noticed in the treated areas.

LICHEN NITIDUS AND TUBERCULODERMA. Presented by DR. MALONEY.

S. V., an Armenian, aged 19, from the New York University and Bellevue Clinic, presented a dark red indurated patch, about the size of a silver quarter, on the back of the left hand, with outlying small papules scattered around it. There was an area of atrophy in the center of the patch. The lesion was of six weeks' duration. There was also an eruption on the shaft of the penis made up of discrete, pinpoint, skin-colored, shiny papules. Microscopic examination of one of these papules showed the picture of lichen nitidus.

DISCUSSION

DR. HIGHMAN: It is one of those rare instances in which lichen nitidus is associated with what appears to be tuberculosis elsewhere. It is maintained in Germany that lichen nitidus is a tuberculide.

DR. WHITEHOUSE: I would not venture a diagnosis.

DR. FRASER: The lesion on the hand is probably an inoculation tuberculosis. Clinically, the lesions on the penis are lichen nitidus. These conditions go well together, for the histologic picture in lichen nitidus is similar to that of tuberculosis.

DR. MACKEE: I agree with the diagnosis.

PAUL E. BECHET, M.D., Secretary.

NEW YORK ACADEMY OF MEDICINE, SECTION ON DERMATOLOGY AND SYPHILOLOGY

Regular Meeting, Nov. 1, 1927

E. J. MALONEY, M.D., *Chairman*

FILTERED ULTRAVIOLET RADIATION. Presented by DR. GOODMAN.

It has been known for some time that fluorescence occurs on the human skin in health and disease in characteristic manner. Recently it has been possible to demonstrate such fluorescence visually. The newest "black light" filter permits the passage of but 10 per cent of violet rays, and much of the ultraviolet rays from 3,900 to 2,300 angstrom units, as emanated from the mercury vapor arc in a quartz lamp. This new filter, unlike others heretofore available, effects skin erythema. The time required for production of erythema is about twice that required by the unfiltered rays. Many problems in the biology of ultraviolet radiation are better understood through the use of the filter. In clinical dermatology, examination with filtered ultraviolet rays gives an insight into the pathology of the lesions, rather than an aid in clinical nomenclature.

All lesions in which keratin is the predominate feature become a vivid white after fluorescence. Thus gray hair shines; natural blond hair gives evidence of a multitude of colors, while artificial blond hair is monotonous; black hair inhibits fluorescence. If a wart is pigmented, the fluorescence of the keratin is lost. Vivid fluorescence of the nails and teeth occur, and artificial teeth are readily distinguished from natural ones. Pigmented and depigmented areas of the skin are readily differentiated and patches of vitiligo, imperceptible by ordinary illumination, are evident. With this new filter, one can distinguish the application of many drugs, as hair dye, so-called hair tonics, salves and other remedies, which are invisible in daylight.

The fluorescence of tinea versicolor is distinctive. I have not found this true of tinea of the hair, as reported by others.

The inflammatory disease of the skin seem to inhibit fluorescence. This field is far too large to discuss now. I am satisfied that examination under filtered ultraviolet radiation is of clinical assistance in the field of radiation therapy. Thus it is possible to determine the erythema resulting from ultraviolet rays at once, many hours before the appearance of the erythema in daylight. Similarly, and of far more import, is the recognition of radium and roentgen-ray effects on the skin. It is possible to determine the time and amount of such application, and we believe that overdosage is detectable. This part of the investigation is being conducted with Dr. R. Lewis, who is in charge of the radium work at the hospital. The determination of late sequelae of radium and roentgen-ray injury is not an academic question alone, as the following indicates.

A child had a nevus on one side of the face, including the ear. Radium had been applied. This was followed by a number of ulcerations resulting in scarring. The clinical appearance some time later was such that Dr. Lewis and I were agreed that parts of the scarring were due to an excess dosage of radium. We believed other parts to have been due to spontaneous ulceration. Examination under filtered ultraviolet radiation gave evidence that no part of the scarring was due to the application of radium. In another instance, a young man was examined by the staff at the clinic, and it was agreed that he had telangiectasia and scarring resulting from an excessive dosage of roentgen ray administered for the permanent removal of excess hair on the chest. There was no such fluorescence as is present with roentgen-ray sequelae. It was learned subsequently that the scars were due to efforts at effacement of the telangiectasia with galvanism. But the greatest opportuniy exists in the detection of incipient roentgen-ray and radium injuries before they are clinically visible. One of the leading roentgenologists was enabled to determine the extent of such changes on the dorsum of his hand. He will hereafter take further precautionary measures. Operations may be planned under this light to predetermine the extent of lesions.

The commercial and industrial uses are wide, but they will not be mentioned now. It may be interesting to hear Dr. Oulmann's experiences with a new German filter.

DR. OULMANN: When I visited Professor Poehlmann's clinic in Münich, I saw a filter used there for diagnostic purposes only. It was impossible to obtain one for use in America. At the present time, they are used more for commercial purposes than for medicine. These filters are said to be composed of mica and glass allowing only a certain wave length to penetrate within. While its use, especially in dermatology, is of diagnostic advantage, I believe the time will come when it will be of therapeutic value.

DR. ABRAMOWITZ: I saw the Wood filter, first devised in 1903, demonstrated about two years ago by a representative of the Hanovia Chemical Company, Newark, N. J. Recently, S. Bommer (*Klin. Wchnschr.* **6**:1142 [June 11] 1927) made a study of the appearance of various diseases of the skin, using a new filter put out by the Hanau Company of Germany. A particular greenish fluorescence was noted in cases of tinea of the scalp. In dermatitis venenata due to the application of some medicament, phosphorescence or fluorescence was noted, depending on the nature of the irritant.

A CASE FOR DIAGNOSIS (ACANTHOSIS NIGRICANS?). Presented by DR. BECHET.

This case was previously presented before the Manhattan Dermatological Society, October, 1927.

DISCUSSION

DR. POLLITZER: Cases of acanthosis nigricans are so rare that it is always a pleasure to see one. In the thirty-seven years that have elapsed since I described the first recorded case of this disease, little more than a hundred

cases have been observed. The case before us is typical in most respects. It began about two years ago in a woman past middle life who has lost weight rapidly during the six months before presentation. The lesions occupy the characteristic sites: lips, neck, axillae, forearms, hands, intermammary, umbilical, pudendal, perineal and anal regions. All of these regions show a more or less marked acanthotic proliferation, ranging from the barely perceptible velvety thickening on the back of the neck to large filiform and digitate excrescences in the axillae, the inguinocrural region, etc. Many of these excrescences present an appearance which so far as I know has not been observed before. They are small, pearshaped or spherical, pedunculated tumors such as are found in fibroma molluscum. The pigmentation is only faintly present in the affected areas on the neck and in the axillae, but is pronounced around the umbilicus and the regions below. Despite these minor deviations from the type form of this disease, beyond question the case is one of acanthosis nigricans. The pallor of the patient and her recent loss of weight, taken in connection with her cutaneous lesions, point with great probability to a malignant disease. In the majority of the cases of the acquired type of acanthosis nigricans, cancer of an abdominal organ has been present.

Dr. Cannon: I have seen two cases of acanthosis nigricans, one with Dr. Fordyce and the other one in private practice, and neither case resembled the one under discussion. Both patients were women, and the condition occurred in one following the removal of a breast for carcinoma. In each instance the lesions were most marked in the axillae and groins, and the flexures of the arms and legs; and consisted of large, dark, bluish-brown to blackish-brown verrucous plaques. Lesions on other parts of the surface of the skin were of the same character. In the case under discussion there are only discrete, pedunculated fibromas, with practically the same color as the surrounding skin.

Dr. Thornley: I saw a case of acanthosis nigricans in Darier's clinic in Paris, and the diagnosis was made by himself, I was very much surprised when I read the diagnosis of this case, for it did not conform in many ways to the case I saw there. There were no pedunculated tumors, and I am very much inclined to agree with Dr. Cannon.

Dr. Levin: I saw the patient when she was presented at the Manhattan Dermatological Society three weeks ago. I simply want to repeat what I said at that time, that the history suggests acanthosis nigricans. At close inspection, however, some of the lesions suggest von Recklinghausen's disease. However, this may be ruled out because of the condition of the palms and soles and the lips, and the absence of pigment. It seems to be a borderline case of the fruste type of acanthosis nigricans. The condition must depend on some abdominal malignancy which interferes with the vegetative nervous system and suprarenals.

Dr. Bechet: The diagnosis of Dr. Cannon is not tenable in view of the fact that besides the many warty fibromatous lesions distributed over the body, the patient has on the entire surface of the palms, soles, and mucous membranes a velvety, papillomatous growth; even the tongue is involved by the same type of lesion. In the axillae and anal region are also thickened papillomatous areas; these would be absent in von Recklinghausen's disease. The patient has lost about 40 pounds (18.1 Kg.) within a few months, a significant fact. The results of roentgen-ray examination of the gastro-intestinal tract were negative, which proves only that malignancy of that tract did not exist; but she has not as yet had a gynecological or abdominal examination, so that carcinosis of some internal organ cannot be eliminated. Her general weakness and rapid loss of weight is presumptuous evidence that such a growth possibly does exist. Nothing more need be said, as Dr. Pollitzer's masterly discussion covers all phases of the case. He was the first to describe the disease, and his opinion of the case is valuable.

XERODERMA PIGMENTOSUM. Presented by DR. CANNON.

J. D., a girl, aged 4½ years, was born in the United States. At birth she was normal, but on exposure to light, pigmentation developed on the skin, and grew progressively worse; she also suffered with conjunctivitis and photophobia. A short time before presentation nodules appeared on the cheeks; they increased in size, and bled easily. The patient was the fifth child in a family of six. The eldest was living and well; the second had died at the age of 8 years with metastasic carcinoma secondary to xeroderma pigmentosum; the third and fourth were living and well; the sixth suffered with xeroderma pigmentosum. Both parents were born in Italy; both were healthy; history of consanguinity or of any familial disease was not present.

Examination showed that the face, neck and scalp presented innumerable macular areas of pigmentation, with dryness, thickening and crusting of the skin. Over the trunk and extremities, more marked on the hands and forearms, were paler pigmented spots. Both eyes showed conjunctivitis, and on the left cheek was a raw, bleeding protuberance the size of a robin's egg. Adjacent to it and on the right cheek were two dry, horny protuberances the size of large peas.

XERODERMA PIGMENTOSUM. Presented by DR. CANNON.

I. D., a girl, aged 20 months, a sister of the preceding patient, at birth was normal except for conjunctivitis, but on exposure to light the unprotected parts of the skin gradually became covered with small, pigmented lesions, and she developed photophobia.

Examination showed on the face, neck, and arms small macular areas of pigmentation. The scalp was dry, crusted, and pigmented. There was marked conjunctivitis. The skin on the trunk was normal.

DISCUSSION

DR. WILLIAMS: These are two interesting cases. As I understand, the children are sisters, and presumably there is some congenital and inherited anomaly. I know nothing of this. The younger child shows an early stage of the lesions; apparently they are freckles. The older one has a characteristic case with marked pigmentation, freckles and formation of tumor. The etiology, so far as is known, is a skin hypersensitive to ultraviolet light, which develops tumors similar to those developed on farmers' skin, with the formation of keratoma senile. The cases are usually slow in developing and continue for a long period of time. I have had a patient coming to the office occasionally for four years, a girl of about 15, who was much worse when first seen than the older girl here. When I first saw her she already had a perforation of the side of the nose. By treating the patient with radium the disease has been held in check; the tumors have disappeared, and the ulcers have healed. We cannot accomplish a cure in a case like this, but it is possible to secure a great amelioration of the condition with exposure of the ulcerations or tumors to a mild erythema dose of radium.

I think it would be wise to snip the larger protuberances with the cold cautery and then apply radium. With careful treatment and the avoidance of too prolonged exposure, and with warning against exposure to sunlight, I believe this child can be greatly improved.

It would be interesting to know whether these patients improve with advancing years and the passing of puberty. I do not know. I have seen some patients apparently improved in the late twenties, but a great deal of observation is needed, and it is one of the misfortunes of dermatology that such cases are not followed for a long period of time, partly through negligence on the part of the patient and partly on the part of the physician. This would be an interesting case to follow. My patient reports every few months, and I have good records to date.

DR. ROSTENBERG: Could not the roentgen ray be used effectively also?

DR. WILLIAMS: I do not know. I have not tried it. I have used radium, and that is all I have had experience with.

DR. POLLITZER: Is there any history of unusual exposure to the sun in early infancy? That may be an etiologic factor of the utmost importance. One often sees a baby in a perambulator with the face exposed to the full sun. On a suitable soil, an exposure of that kind might provoke the disease.

With regard to the treatment, active removal of the tumors as they appear will undoubtedly prolong the life of the patient. One patient has been reported cured by roentgen-ray treatment.

I should say that the older child already has carcinomas and the prospect for attaining old age is not favorable. Great care may prolong life in the younger child.

DR. ABRAMOWITZ: Has there been any investigation of the diet of these children from the standpoint of avitaminosis?

DR. ROSTENBERG: Has the urine been examined for hematoporphyrin, which usually appears in the urine when skin diseases are due to exposure to light?

DR. ANDREWS: Referring to the query as to whether there would be any changes after puberty, I have a patient 19 or 20 years of age, and have pictures of her taken when she was 10 or 12 years old. She has been shown here, and there has not been any change in the progress of the disease since puberty. Some studies of diet were made in that case, and the child was fed on acidophilus milk and vitamins for over a year without improvement.

DR. POLLITZER: One must not forget in connection with the question of diet or some individual influence, that a large percentage of these cases occur in children of consanguineous parentage, which would seem to rule out the factor of diet. In a large proportion of the cases, the parents have been cousins. Among the earliest cases recorded, some were adults. Of the late Dr. Taylor's seven cases, the first described in this country, five occurred in two families and the patients were the children of cousins.

DR. WILLIAMS: The question of consanguinity is a large one, but I wish to raise a protest against invoking consanguinity as a cause of disease. I do not believe it is the cause. It may cause the appearance of a characteristic present in both parental lives, and that characteristic may be so rare that only a consanguineous marriage would bring it out, but I do not accept the idea of consanguineous marriages producing disease. If consanguinity is found, a careful search should be made to determine whether the disease has occurred on both sides of the ancestry.

DR. CANNON: The diets of the children were practically normal, and the blood metabolism and basal metabolism were entirely normal. There was an increased cholesterol and an increased sugar tolerance in the older child. There is usually an increased tolerance to roentgen ray and radium in this condition, and I had planned to remove the epithelioma with endothermy and to expose the area to massive doses of roentgen ray instead of smaller doses as suggested by Dr. Williams. There has not been any undue exposure to sun so far as could be determined.

A CASE FOR DIAGNOSIS (PARAPSORIASIS?). Presented by DR. HOPKINS.

A. F., a man, aged 60, born in Austria, a clothes presser, was first seen in the Vanderbilt clinic four years ago. He complained at that time of an eruption across the back and on the arms and legs. The lesions first appeared on the back, and shortly after, others appeared on the arms and legs. The lesions were moderately pruritic. After one year's treatment with external applications and roentgen ray, all the lesions disappeared, and the patient remained free from eruption until six months before presentation, at which time the lesions reappeared on the back, arms and legs and right foot, and had persisted. The lesions were itchy, but this symptom had been somewhat

relieved by four roentgen-ray treatments. Lesions of the mucous membrane were not present. The patient's general health was good, and loss of weight was not reported.

Scattered over the entire back were numerous irregularly outlined, dollar to palm-sized brownish-yellow plaques moderately scaly, and somewhat infiltrated. Similar small lesions appeared on the arms and legs.

DISCUSSION

DR. KINGSBURY: My impression is that the condition is parapsoriasis rather than the early stage of mycosis fungoides. It seems as though the amount of itching the man suffered is that characteristic of mycosis fungoides. In talking with the son there seemed some doubt as to the history of the temporary disappearance of the lesions and apparently the lesions have persisted from the start. I regard it as a case of parapsoriasis.

DR. CHARGIN: I consider it a case of premycosis fungoides rather than parapsoriasis. There is too much infiltration present to permit of a diagnosis of parapsoriasis. The lesions in parapsoriasis of the en plaque variety are round or oval, larger than in this case, and do not show the central clear areas observed in this patient. The fact that the eruption appears at varying intervals would be an indication that it is not parapsoriasis. It is my impression that the condition will eventually prove to be mycosis fungoides.

DR. LEVIN: I feel as Dr. Chargin does about this. The clinical appearance of the lesions is that of mycosis fungoides. I say this because the lesions are not superficial as in parapsoriasis, which was suggested. The patches are infiltrated and in places show well defined, elevated borders. Besides, the patient says that itching is present.

DR. POLLITZER: Has a biopsy been made in this case? In regard to parapsoriasis: the lesions are irregularly distributed and have a fantastic outline. One of the plaques on the back has a configuration such as is found only in mycosis fungoides. At the same time, there is no differentiation that is more difficult to make than that between mycosis fungoides and parapsoriasis, and I would make the diagnosis with great reserve, though on the whole I incline to the diagnosis of mycosis fungoides.

DR. HOPKINS: This man was presented some years ago by Dr. Wise, and the same question as to differential diagnosis came up. Recently the lesions over the shoulder have seemed to show more infiltration, and a biopsy has been taken. So far as I can see, the thickening in this lesion is not due to infiltration but to parakeratosis. Beneath the epidermis only a slight perivascular infiltration with lymphoid and young connective tissue cells is seen. A few fragmented nuclei were found, but not enough to make one suspect mycosis fungoides.

A CASE FOR DIAGNOSIS (TERTIARY SYPHILIS?). Presented by DR. HOPKINS.

T. W., a colored man, aged 22, born in South Carolina, a laborer, first appeared at the clinic July 29, complaining of ulceration on the lower part of the abdomen of six months' duration. The condition first started as a small white papule which became progressively larger and subsequently ulcerated. Three months after the onset of the lesion, the patient developed several wartlike lesions on the prepuce. He contracted gonorrhea two months previous to coming to the clinic. Gonococci were present in the urethral discharge.

In the suprapubic region, 1 inch above the root of the penis, was a lesion 1 by 1½ inches (2.5 by 3.7 cm.), consisting of red, eroded, papillomatous granulations, with numerous miliary ulcerations scattered through the lesion. The border was elevated about 3 mm. On the outer and inner aspects of the prepuce were numerous typical cauliflower-like lesions of papillomata acuminata. Glandular enlargement was not noted. The results of laboratory tests were: Wassermann reaction negative; cholesterol, +; alcohol, negative;

Kahn reaction, 3 units. Dark-field examination did not show syphilis, but numerous organisms of *Spirocheta refringens*. Results of examination for Donovan bodies, blastomyces, Ducrey bacilli and gonococci were negative. The biopsy revealed deep perivascular infiltration, with plasma cells, and thickening and infiltration of blood vessel walls. Miliary abscesses were present beneath the epidermis.

DISCUSSION

DR. CHARGIN: Although the pathologic process suggests syphilis, it is impossible to make a positive diagnosis of syphilis from the clinical standpoint. The history, evolution and course do not permit a diagnosis of syphilis. Clinically, the lesions do not suggest gummas or the ulcerate type of tuberculous syphiloderm. To settle the diagnosis, a therapeutic test is indicated, and I suggest such a procedure.

DR. WILLIAMS: I think it is impossible to make an immediate clinical diagnosis in this case. It reminds me of many cases that we saw in camp which we thought then were cases of tertiary syphilis. The Wassermann test was always positive, but that did not establish the diagnosis. I think it is impossible to establish a diagnosis without careful observation and careful cultural experiments and careful examination of the slides. It is undoubtedly an infection, and we cannot decide what it is without laboratory examination. We must rely on examination of the local lesion and not on the blood.

DR. PAROUNAGIAN: I do not know why we should say it is impossible to make a diagnosis in this case. The man presents a characteristic depigmented scar on the midshaft of the penis of long standing, which would strongly suggest to me that the pubic lesion was of syphilitic origin. I would offer the diagnosis of tertiary syphilis, and would confirm the same with a therapeutic test.

DR. HOPKINS: The patient was presented on account of the difficulty in making a diagnosis. We expected a positive Wassermann reaction. When this was not found, the question arose of the possibility of a blastomycosis or granuloma inguinale. Results of all examinations for causative organisms were negative. The histologic observations suggested syphilis more than any other condition, but they did not exclude the diagnosis of granuloma inguinale.

LYMPHOGRANULOMATOSIS INGUINALE (?). Presented by DR. HOPKINS.

A. J., a chauffeur, aged 27, born in New Orleans, was first seen in the clinic on October 28, with a suppurating lesion in the left inguinal region. He first noticed swelling in this region three months before coming to the clinic; it was painless, and became progressively larger. One month previous to presentation, three small suppurating openings appeared in the lesions, which had persisted. The patient had used salves and hot applications without material improvement in the condition. He developed a lesion on the penis one week before presentation, and three weeks before that he developed an itching eruption in the crural region. His general health was good, and he denied syphilitic infection. He had had gonorrhea two years previously, and since then had had intermittent urethral discharge.

On the upper border of each thigh, the patient presented a superficial scaling eruption which had a raised convoluted border made up of dried superficial vesicles. In the left groin, there was an oval group of enlarged lymph nodes, adherent to the skin, and discharging a rather thin pus through several sinuses.

The Wassermann reaction was negative; the cholesterin test, 4 plus; alcohol test, 4 plus; Kahn reaction, 2 plus.

DISCUSSION

DR. LEVIN: On what was the diagnosis based?

DR. HOPKINS: The diagnosis was based on the presence of a chronic inguinal adenitis, suppurating from many foci, with the absence of Ducrey

bacilli or gonococci in the exudate. I think it will require further negative observations to rule out the possibility of chancroidal or gonorrheal bubo, but this lesion is too chronic to make either of these diagnoses probable. I am inclined to think that it belongs to the group of cases described by Nicolas and Fabre, and by Pardo-Castello, as lymphogranulomatosis inguinale. An excellent description of the disease recently appeared in the ARCHIVES OF DERMATOLOGY AND SYPHILOGY by Pardo-Castello. It seems probable that these cases form a distinct clinical group. I suspect that they are not rare and are sometimes passed over with the diagnosis of tuberculous or chancroidal adenitis.

CHANCROID (?). Presented by DR. CANNON.

Mrs. E. C., a colored woman, aged 22, a houseworker, born in the United States, was first seen at the clinic Oct. 7, 1927, complaining of a lesion on the genitals which had been present for two years and for which she had not been treated.

At the posterior end of the left labium majus was a quarter-sized ulceration, the base of which was covered with exuding, unhealthy granulations. The tissue immediately surrounding the ulceration was moderately indurated. The inguinal glands were not enlarged. Other evidence of syphilis was not present. A smear for Ducrey bacilli was negative; also a smear for tubercle bacilli. A biopsy showed chronic ulceration with infiltration of the plasma cell in the floor of the ulcer and about the deep vessels. The observations were compatible with chancroid or gumma.

The Wassermann reaction was 2+; the Kahn reaction, 5 units. Results of dark-field examination were negative. A culture showed a strepto-bacillus, probably bacillus of Ducrey.

DISCUSSION

DR. PAROUNAGIAN: I examined the patient closely. I am not willing to accept the diagnosis of chancroid because this is a single lesion, of long duration, with lack of auto-inoculability, and because there is an absence of inguinal glands and Ducrey organisms.

I am not inclined to make the diagnosis of gumma, as there are no undermined edges, little destruction has occurred in two years, and other evidence of syphilis cannot be detected.

I would offer the diagnosis of granuloma inguinale, on account of the slow course of the lesion, the nativity of the patient and the absence of lymphatic swellings. It is not easy to demonstrate the Leishmann-Donovan organisms in cases of long duration like this. A therapeutic test with tartar emetic is probably the best procedure.

DR. WILLIAMS: I agree with Dr. Parounagian.

DR. ROSEN: During the last five or six years I have seen a number of similar cases: ulcerations on the mucous membrane of the vagina, irregular in outline with edges slightly undermined, resembling clinically chancroid or granuloma inguinale, in which repeated microscopic studies have been negative. These conditions were obstinate to all therapeutic measures.

DR. CHARGIN: I do not think that the lesion in this case resembles those observed in ulcus vulvae acutum. Ulcus vulvae acutum occurs in young girls, and the disease runs a more or less acute course. There are three clinical types of ulcus vulvae acutum — gonococcal, chancroidal, and miliary — none of which, however, correspond to the case under discussion. The disease is said to be due to *Bacillus crassus*. We are probably dealing with granuloma inguinale in the case under discussion.

DR. ROSTENBERG: I had the good fortune to see and describe the first case of ulcus acutum vulvae in this country. The case does not correspond to it at all. This is an acute disease starting with fever and malaise, and runs a

short self-limited course. The ulcers, either single or multiple, appear on the vulvae of young girls, usually before puberty, and heal in a short time spontaneously. *Bacillus crassus,* discovered by Lipschuetz, is easily demonstrated in the smear.

DR. HOPKINS: In regard to granuloma inguinale, I was inclined to rule that out on account of the histologic picture. The lesion is almost a pure plasmoma. I do not think that that type of reaction has been described for granuloma inguinale.

DR. CANNON: When I first examined the patient, I made a diagnosis of granuloma inguinale because of the rolled edges, simulating epithelioma, the marginal spread, healing with scar formation and a serosanguineous discharge at the base of the ulcer. Dr. Hopkins' inability to find any evidence of granuloma inguinale in the sections taken, his failure to demonstrate Donovan bodies in smears taken from the ulcer and the patient's positive Wassermann reaction caused us to think it was possibly a gummatous lesion. The ulcer did not change in appearance after two injections of arsphenamine and two of mercury.

As Dr. Parounagian has said, similar lesions are not infrequently seen in which a positive diagnosis of granuloma inguinale cannot be made, and yet the ulcer heals entirely after intravenous injections of tartar emetic.

FOLLICULITIS DECALVANS ET ATROPHICANS. Presented by DR. MCCAFFERTY.

Mrs. T. K., aged 48, born in Russia, a houseworker, first appeared at the clinic on July 12, 1927, complaining of loss of hair in spots on her scalp and an eruption beneath and between her breasts and over the lower part of the back. The duration of the latter eruption was one year; of the alopecia, six months. The itching of these lesions first attracted the patient's attention. The lesions on the body, especially over the sacrum, consisted of minute, discrete, follicular plugs with a slight elevation of the follicular orifices. The color of these lesions was the same as that of the intervening skin. The eruption between the breasts was similar. On the scalp were several areas of cicatricial alopecia, ranging in size from that of a dime to that of a dollar. At the periphery the hairs were surrounded by a pronounced keratosis; several patulous follicles had small protruding keratotic plugs which were perceptible to the touch. The areas of alopecia were white and cicatricial. The axillae were entirely devoid of hair. There was a rather profuse alopecia in the pubic region, but some hairs were present. Atrophy was not noted in the axillae or pubic region. Hairs were not present on the arms or legs, and atrophy was not noted. The patient said that she never had had any hair in the axillae nor on the arms and legs. She was reticent about the alopecia of the pubic region and would not answer a direct question. There was no history of favus. The Wassermann reaction was negative. A section from the buttock showed diffuse hyperkeratosis. The follicular funnels were distended with a dense horny plug in which remains of hairs were imbedded. The inner root sheath was thin, and the cells were flattened to the base of the funnel. The granular layer was increased, and there was dense round cell infiltration about the follicles, which was most marked at the base of the funnel. Inflammatory reaction did not occur between the follicles in the scalp. The deeper portion of the follicles were practically normal; typical "corps-ronds" were not noted in either section. The picture was that of lichen spinulosus with perifolliculitis.

DISCUSSION

DR. LEVIN: I thought the condition suggested pseudopelade rather than folliculitis decalvans. Was there any evidence of follicular infection?

DR. MCCAFFERTY: This case was presented because of the alopecia and cicatricial atrophy of the scalp and the appearance of lichen spinulosus lesions

of the body. The two conditions were regarded as a clinical entity. Graham Little reported the first case in 1915, in which he associated the alopecia and cicatricial atrophy of the scalp, the alopecia in the axillae and pubic region without atrophy and the lichen spinulosus-like lesions of the body as one and the same condition, and he gave to it the name of "folliculitis decalvans et atrophicans." Following the report of this case, Dore in the same year reported another which was similar, and Wallace Beatty reported the third. Beatty thought the condition which he described was an unusual form of Darier's disease, but a communication from Dr. Little stated that he was not in accord with the diagnosis of Darier's disease. Following Beatty's case, which was the third, Graham Little observed two other cases presenting the same complex of symptoms. The patient presented this evening is regarded as one of this group, namely alopecia and cicatricial atrophy of the scalp; alopecia in the axillae and fairly marked alopecia of the pubic region in association with lichen spinulosus beneath and between the breasts and over the sacral region. So far as I can ascertain, this condition has not as yet been described in this country. Dr. Hopkins will give the histologic report.

Dr. Hopkins: This seems to me the most interesting case presented this evening. I have never seen one which resembles it, but when Dr. McCafferty showed me the report of Graham Little published in 1915, the resemblance of this case to his was most striking. Dr. Little's description could be applied, with a few changes as to location, to the patient presented. It does not seem to be the condition ordinarily described as folliculitis decalvans. Such cases usually show some evidence of suppuration, and do not show the marked follicular plugs which are evident to the naked eye, and which are still more striking under the microscope in this case.

Soon after Graham Little's report, two other cases were presented before the British Dermatological Society by Dore and Wallace Beatty. In the discussion of these cases, several observers expressed the opinion that this was a variant of Darier's disease. This view was based partly on a pathologic report that corps-ronds were present in the lesions. However, the photomicrographs which were published resembled closely the sections from Dr. McCafferty's case, and did not show bodies with the characteristics of those found in Darier's disease.

The histologic pictures in the section from the scalp and from the body are almost identical in this patient and convince one that the process is the same in both locations. It seems that the case presented is an excellent example of a rare condition first described by Graham Little.

Tinea Capitis. Thallium Epilation. Presented by Dr. Hopkins.

M. M., a girl, aged 3 years, born in the United States, was first seen in the clinic on Aug. 19, 1927, with a history of an eruption of the scalp of three months' duration. Treatment had not been given to the patient prior to coming to the clinic. On Sept. 21, 1927, she was given 8 mg. of thallium acetate per kilogram of body weight with complete epilation of the hair of the scalp.

The left side of the scalp showed a half-dollar sized area and one dime-sized area; there was a third area, dollar-sized, in the occipital region of the scalp. In these areas, there was almost complete alopecia due to breaking off of hair. The scalp was erythematous and covered with yellowish crusts. Some of the involved areas of the scalp suggested atrophy. Examination for tinea was positive.

DISCUSSION

Dr. Abramowitz: I have been interested in the epilation produced by thallium acetate ever since my last article on "Drug Eruptions," which appeared in the May and June issues of the *Medical Times*, 1924. I cited there the experiments on animals by Buschke and his co-workers, which showed that a

loss of hair could be produced, but toxic manifestations frequently occurred with atrophy of the testicle, hypothyroidism and even cataract. This drug when formerly used as an antihydrotic in pulmonary tuberculosis had to be abandoned on account of the alopecia and other toxic symptoms it produced. Recently some British investigators had employed this remedy in children affected with tinea capitis, and had obtained satisfactory results. On account of the toxic effect of this drug they advise its use only for very young children, or when the roentgen ray, for some reason, cannot be used. The children must be accurately weighed and the dose of thallium acetate must be exact. The results in this patient encourages the further trial of this remedy, to establish its usefulness as an additional or adjuvant measure in the treatment of patients with diseases of ringworm when epilation is necessary.

DR. FELDEN: I have had opportunity to treat about fifty patients with ringworm of the scalp with thallium acetate while in charge of the wards for patients with diseases of the skin at the Children's Hospital of New York City, at Randall's Island. Toxic effects were observed only in one case, that of a girl aged 13, with approaching puberty as shown in the beginning development of her breasts. I should not have used the full dose in this case, since it has been pointed out that patients at the age of puberty are much more apt to develop intoxication after ingestion of thallium than children. Thallium for adults is extremely dangerous, and, if used can be used only in one half or in even smaller dosages than those used for children. The girl mentioned had a very good epilation on the eighteenth day after the administration of the thallium, but developed such serious pains in the legs and feet that she could not walk and was bedridden. She also complained of pains in the stomach, and her blood picture showed the changes characteristic for thallium intoxication, consisting of decrease of the red blood cells, and relative increase of the lymphocytes and eosinophils. This girl recovered in about five weeks. In about 50 per cent of the other patients who were given thallium acetate, a complete spontaneous epilation with cure of the trichophytosis occurred. Partial alopecia was produced in most of the remaining 50 per cent, and it could be completed by extracting the loose hairs with adhesive strips, which is entirely painless. In two patients with a marked disparity of age and body weight, there was no epilatory result. One of them was a girl aged 15 with deformities of the bone due to rickets, who had attained only the size of a 3 year old child, and who was physically infantile. The other one was a boy of 19, a cretin, who looked like a boy of 4 or 5. Similar failures of the epilatory effect in cases with discrepancy between body weight and age have been observed and reported in Europe.

The hair begins to loosen from about the tenth day, and usually comes out on the eighteenth day. It began to regrow from three to four weeks after the epilation in my patients. Summarizing, I can say that thallium acetate is a valuable drug for the production of alopecia in children, and is preferable to roentgenotherapy in cases of mental defectives for whom, on account of their restlessness, etherization is often necessary and dangers are implied to attendants who must hold them. I have used the proportion of 8 mgm. (=milligram) per kilogram of body weight.

DR. PAROUNAGIAN: I had the privilege of visiting Dr. Buschke's clinic in Berlin last summer, and he was very kind in inviting me to a demonstration of fifteen or twenty of these thallium cases. He seemed to get good results, although there was a feeling that it was a rather dangerous drug to handle and should be carefully administered with regulation of dosage to body weight, and that it was contraindicated in adults.

DR. HOPKINS: The points of interest in regard to thallium epilation have been so well brought out in the discussion that I have little to add. One should remember, however, that while we owe to Buschke the development of this method, the credit of its discovery belongs to Ricardo Cicero of Mexico City. I would

like to emphasize that we presented the cases as illustrative of a method useful under circumstances in which roentgenotherapy could not be used, and not with any idea that it could replace roentgenotherapy in the treatment of tinea capitis.

A Case for Diagnosis (Parapsoriasis?). Presented by Dr. Rulison.

A. N., a man, aged 37, from the Cornell Clinic, service of Dr. Schwartz, had previously been shown on October 25, at the New York Dermatological Society, where it was suggested that the diagnosis might be parapsoriasis.

DISCUSSION

Dr. Levin: I cannot see why a diagnosis of parapsoriasis is suggested. The patient presents more or less of a generalized eruption, most marked on the extremities. This eruption consists of inflammatory lesions and elevated hyperkeratotic follicular lesions which are conical and give a rough sensation on palpation. Telangiectasia was simulated by fine abrasions in the skin. The condition seemed to be more of a catarrhal inflammation than of the type seen in parapsoriasis, and suggested the diagnosis of chronic eczema with hyperkeratosis of the follicles.

Dr. Rulison: The case was presented for diagnosis. We have none to offer. The patient's skin condition followed an attack of chickenpox, but I do not know whether that has any bearing on the case. The condition appeared when the patient was 10 years of age. The large variety of skin lesions, or the variations of the skin lesions, make it difficult to analyze. In the flexure of the elbow he has skin-colored papules which are shiny on the surface. I almost thought at first that the condition might be lichen nitidus. On the ankle are hyperkeratotic papules which are violaceous and somewhat shiny; on the inner thigh are large plaques of erythema and other plaques of indefinite character. On the thighs have been recurrences of ulcers for thirty years without pus formation, but the ulcers leave scars. The man says he has never had any itching. The suggestion of parapsoriasis has been made, and is offered tentatively. We would be grateful for any suggestions as to treatment. Two biopsies were taken, and the histologic examination simply showed a chronic inflammatory process, nothing pathognomonic. The microscopic examination of sections, however, seems to exclude the diagnosis of lichen planus.

Dr. Rostenberg: The case should be discussed, for it is interesting. The lesions on the upper thigh are not characteristic, and, while the lesions on the penis looked something like lichen nitidus, I would not make that diagnosis. But the man has a patch on the lower limb composed of red isolated papules some of which show horny plugs, and if seen on the backs of the fingers, would undoubtedly suggest the diagnosis of pityriasis rubra pilaris.

Dr. Andrews: I did not see the patient well, but I saw the lesions on the penis, elbows and legs. I have treated a patient with lichen nitidus which in general resembled the red patches on this man's leg. H. W. Barber wrote an article about it a year ago, and described such widespread confluent patches.

Dr. Levin: I cannot see on what the diagnosis of lichen nitidus is based. The eruption does not bear any resemblance to previous cases shown. We find minute pinpoint or slightly larger, papular elevated lesions in patients showing lichen nitidus, which on examination show a pathologic process of tuberculosis. The condition is regarded by some as a tuberculid. The skin picture in this patient is that of a catarrhal inflammation.

A Case for Diagnosis (Purpura Annularis Telangiectoides?). Presented by Dr. Bechet.

E. S., a woman, aged 53, said that the eruption had been present for three months. She had some scaly lesions on the left shoulder. The thighs and

legs were covered with more or less scaly lesions, distinctly annular and hemorrhagic. The periphery of these lesions were red hemorrhagic puncta throughout.

DISCUSSION

DR. ROSTENBERG: I believe that we are dealing with an atypical case of seborrheic dermatitis, as this woman also has areas of dermatitis on the sternum which look like seborrhea.

DR. WILLIAMS: I do not see why any one should make the diagnosis of seborrheic dermatitis. That is a good name if limited to a definite lesion with a greasy skin, sharp borders, greasy scales, of an inflammatory nature and located in seborrheic regions, such as the chest and the scalp. In this case the skin is not greasy, and there is no tendency to scaling and no sharp borders. Why call the condition seborrheic dermatitis? I believe the patient has a dermatitis, but I cannot see why we should call it seborrheic. The woman has a round patch on the knee, which is scaly, sharply outlined, white, and exceedingly suggestive of psoriasis. I do not think it is psoriasis, for I have seen lesions on the legs of stout women, such as this one, which cleared up under simple dressings. On the anterior aspect of the ankle is a distinctly inflammatory lesion with crusting suggestive of dermatitis or eczema; on the flexure of the elbow are patches of dermatitis, and at the base of the toes and fingers are similar patches of dermatitis. The case impressed me as a case of rather acute dermatitis, probably infectious in origin, allied to the group of infectious eczematoid dermatitis. I think it is a dermatitis rather than Majocchi's disease or psoriasis or seborrhea.

DR. LEVIN: I agree with Dr. Williams that seborrheic eczema is not present. I feel, as Dr. Eliot used to teach, that seborrheic eczema is rarely if ever found below the line of the ensiform cartilage. I think this is a case of eczema.

DR. WILLIAMS: There is no reason why a woman with seborrheic dermatitis over the sternum should not have simple or infectious dermatitis elsewhere.

DR. BECHET: I am glad to have had such spirited discussion about the case, but am still at a loss for a definite diagnosis. Dr. Williams believes that seborrheic dermatitis must be greasy, yet what can one call the dry and scaly eruptions on the borderline of psoriasis situated on the scalp, elbows and knees, which are definitely not psoriatic? This woman has lesions resembling several dermatoses; on the shoulder, they are typical of seborrheic dermatitis; on the knees and ankles, they are sharply outlined, dry and squamous, and somewhat suggestive of dermatophytosis; on the thighs, they are sufficiently annular and hemorrhagic, with "red pepper" puncta at the periphery of the annular lesions, and at least suggest the possibility of Majocchi's disease, even though pigmentation and atrophy are absent.

ACRODERMATITIS CHRONICA ATROPHICANS. Presented by DR. CANNON.

R. B., a seamstress, aged 27, born in Russia, was first seen in the clinic October 8. At that time she gave a history of an erythematous area starting in the skin of the lower part of the right leg and associated with the sensation of increased temperature. This condition gradually spread to the thigh, and was symptomless except for the sensation of heat in the affected part. Three years after the onset of the disease, one area 10 by 3 cm. appeared to become whiter and the skin more atrophic. The skin over the rest of the involved areas was persistently redder than the normal skin. The only treatment the woman was given was some pills.

On the right leg from 2 cm. above the ankle to 4 cm. below the crest of the ilia, and extending completely around the leg, the skin appeared erythematous in some areas and violaceous in others. Hardening of the skin was not noticeable, and in parts it appeared atrophic, with the superficial veins shining through. The superior and inferior boundary lines of this condition were well defined. On the anterior surface of the lower thigh, the skin appeared slightly pigmented as well as atrophic.

DISCUSSION

DR. COOMBES: There is little to be said in the diagnosis of this case. It is undoubtedly one of acrodermatitis chronica atrophicans. There is a distinct dermatitis and atrophy of the skin, the underlying vessels showing through, and here and there slight telangiectasia and pigmentation. There are, however, two interesting points in this case. One is that the condition has been confined to one extremity for a long time without any evidence of involvement of the other extremity or arms. There was nothing in the history concerning infiltration, but I think that one could feel some definite infiltration on the thigh in a patch which looks very much like morphea. However, I think the whole is a part of the original acrodermatitis.

DR. POLLITZER: The patch on the upper part of the thigh, when seen by itself, is a perfect picture of the disease described by Czilak as dermatitis lichenoides chronica, which I have shown to be histologically an early stage of scleroderma. In this case then, there is a combination of that unusual form of scleroderma, described by Czilak under a different name, with the atrophy and the rest of the picture of acrodermatitis.

DR. ROSEN: I would like to know whether an examination was made for arsenic. Some time ago, I presented a patient with acrodermatitis atrophicans and scleroderma in whom arsenic in abnormal quantities was found in both the blood and the urine at different times. The patient was given frequent doses of sodium thiosulphate over a long period, with marked improvement. He had not been able to close his hands, and after six or eight months' treatment he was able to return to his work.

DR. CANNON: We shall be glad to follow Dr. Rosen's suggestion and have a determination of arsenic made of the patient's blood and urine. Arsenic is being found in so many cases of dermatoses that I have begun to doubt whether its presence is of pathologic significance.

LICHEN PLANUS. Presented by DR. PAROUNAGIAN.

B. M., a man, aged 29, presented a generalized and intensely itching eruption of about one month's duration. The examination revealed an extensive eruption, consisting of violaceous, flat-topped, shining, irregular papules of varying sizes. The diagnosis of lichen planus was readily made, but the interesting features of the case were the extensive lesions of the mucous membrane, involving the buccal mucosa, the tongue, and the entire vermilion border of the lower lip.

LICHEN PLANUS ATROPHICUS. Presented by DR. SPIEGEL for DR. FOX.

A. D., a mulatto, aged 63, whose father was white and whose mother was colored, who was born in Florida and was a street cleaner, complained of severe itching for four months before presentation. Examination showed numerous match-head to dime-sized, discrete lesions, situated mostly on the buttocks and lower extremities, with a few lesions on the forearms. The primary lesion appeared as a small, red, pruriginous papule, which increased in size, the center becoming bluish black and depressed, and which apparently showed atrophic and sclerotic changes. The larger lesions and patches were surrounded by an areola and had a ringed appearance. Lesions of the mucous membrane were not present. The Wassermann reaction of the blood was negative. Urinalysis did not reveal albumin or sugar. The blood count showed: leukocytes, 8,600; large lymphocytes, 12 per cent; small lymphocytes, 15 per cent. The observations were verified by biopsy.

FAVUS TREATED WITH THALLIUM ACETATE. Presented by DR. HOPKINS.

P. F., a school girl, aged 11, born in the United States, complained of an eruption of the scalp which had persisted for the last seven years. At presen-

tation there were numerous large patches scattered over the scalp, which consisted of heavy crusts deeply embedded in the skin; numerous favus cups were present. There were also atrophic patches, loss of hair and lack of follicles. Fungi were found in the scutula and in the hair, and roentgen-ray treatments were given. Despite epilation, the condition recurred in a milder form, and the patient received thallium acetate, 8 mg. per kilogram of body weight. On October 19, she appeared at the clinic complaining of pain in her feet. There were no other toxic symptoms. The hair was beginning to loosen.

CHEILITIS EXFOLIATIVA, CURED WITH ENDOTHERMY. Presented by DR. ROSTENBERG.

A. S., a woman, aged 29, whose past and family histories were irrelevant, had an eruption which had been present for eighteen months. The lower lip became enlarged and swollen, and covered with a heavy crust which bled easily, fell off in a few days and reappeared in a short time. The lower lip was greatly enlarged and covered by a thick, grayish-green, foul-smelling crust, which could be readily removed in toto, coming off like a cast. The underlying surface was glistening and appeared thickened.

The patient was treated with various ointments, filtered and unfiltered roentgen ray and ultraviolet light. In addition, ovarian extract was used, as she claimed that the condition was aggravated around the time of menstruation. However, nothing made the slightest impression, and the process repeated itself several times in one month. Four months before presentation, the entire membrane was destroyed with the monopolar endothermy current, and since then has not recurred.

GRANULOMA INGUINALE. Presented by DR. CANNON.

Miss M. B., a houseworker, aged 19, born in the United States, first came to the clinic on Sept. 23, 1926, with a history of having noticed a sore at the posterior angle of the vagina about four months before presentation. The lesion appeared one week after exposure. She did not receive treatment for two months, and then went to Roosevelt Hospital. The blood test at that time was found positive, and she received three treatments with arsphenamine. For the next month, she had only local treatment. When first examined at the clinic, the patient had a negative Wassermann reaction, but, in spite of this, she was given numerous injections of arsphenamine and mercury, without improvement of the lesion. She then went to the City Hospital, where smears showed Leishman-Donovan bodies; following this, she received numerous injections of tartar emetic. The active ulceration healed, but the hypertrophied labia did not become smaller. After discharge from the City Hospital, the patient stopped treatment and remained well for six months, when ulceration reappeared on the vulva.

On examination, the patient showed marked hypertrophy of the right labium majus; the left labium majus was moderately enlarged. On the inner aspect of both labia and at the fourchette there was an active ulcerated surface covered with granulation tissue and discharging a purulent exudate. The Wassermann reaction was negative; alcohol test, negative; cholesterol test, 3 plus, Kahn reaction, 2 plus, 4 plus and 4 plus.

GRANULOMA ANNULARE. Presented by DR. WOLF.

B. W., aged 51, said that two years before presentation, solitary papules had appeared on the back of the left hand. These had coalesced, forming one large circular patch. Eighteen months later, two other patches appeared in the region of the left wrist. Later, solitary papules appeared on the right wrist. Two weeks before presentation, new lesions appeared on the right side of the neck and at the inner end of the right clavicle.

The large lesion on the back of the left hand was circular, 6 by 8 cm. in diameter. It was pigmented in the center, and had an infiltrated border near the phalanges. The other lesions on the left hand were more violaceous and had clear central portions. The lesions on the right hand and wrist were discrete, somewhat raised and purplish red. The neck and clavicular lesions were round and yellowish.

J. J. ELLER, M.D., Secretary.

DETROIT DERMATOLOGICAL SOCIETY

Regular Meeting, Nov. 15, 1927

GEORGE VAN RHEE, M.D., *Presiding*

EPIDERMOLYSIS BULLOSA. Presented by DR. C. K. VALADE.

V. M. S., a boy, aged 9, presented erythematous, slightly infiltrated, scaling plaques and scars over the joints of the fingers, toes, elbows and knees and also on one arm. Superficial, scaling patches on the palms suggested previous vesicle formation. Several finger-nails and toe-nails had been lost. The tip and frenum of the tongue had been destroyed. There was a history of formation of bullae at sites of trauma, and a bulla was said to have appeared on the tip of the tongue, causing loss of tissue. The condition was said to have begun in infancy, but the exact time of onset was unknown. The family history was not obtainable.

DISCUSSION

DR. JAMIESON: The palmar lesions are rather suggestive of lupus erythematosus.

DR. SHAFFER: Considering the condition of the nails and of the tip and frenum of the tongue, this case belongs in the group of the dystrophies. There is a slight ichthyosis, suggesting a shading between the ichthyosiform erythrodermas and epidermolysis bullosa.

DR. PARKHURST: In this case the dry skin covers the extensor rather than the flexor surfaces, and bullae have appeared only at points of trauma, which would favor a diagnosis of epidermolysis bullosa rather than ichthyosiform erythroderma.

A CASE FOR DIAGNOSIS. Presented by DR. R. C. JAMIESON.

E. E., a housewife, aged 24, one year before presentation had first noticed a round erythematous patch, 1 cm. in diameter, on the right side of her neck. Scaling, elevation or induration were not noted, and subjective symptoms were not present. Similar lesions, from 1 to 3 cm. in diameter, later appeared near the original patch. The tonsils and teeth appeared to be normal, and the past history seemed irrelevant.

DISCUSSION

DR. BIDDLE: At the last meeting, two sisters who had morphea were presented. One had had this kind of an eruption before the morphea.

DR. KEIM: This may possibly be a case of lupus erythematosus.

DR. PARKHURST: The large patch suggests early lupus erythematosus, but the absence of scales and follicular plugs and the presence of a faint purpuric area would favor a diagnosis of toxic erythema.

MORPHEA. Presented by DR. R. C. JAMIESON.

Miss V. M., aged 21, a clerk, had had influenza in 1921 and pneumonia and bronchitis at other times. For one year, an increasing number of sclerodermic

lesions had appeared on the right side of the neck and on the right shoulder, and one patch had appeared on the left shoulder. Some were increasing in size, while others showed atrophy and the hardness of scleroderma. Mixed glandular therapy had been used for one month without apparent effect.

LUPUS VULGARIS. Presented by DR. GEORGE VAN RHEE.

A middle-aged man had contracted lupus vulgaris of the nose in Europe at the age of 11. At 12 he had come to America, and in 1916 he had first been treated at Harper Hospital in Detroit. The treatment was continued for three years, and finally the area was excised and a plastic operation was performed. In 1924, the lesions had reccurred in the original area and persisted.

DISCUSSION

DR. SCHILLER: What results are being obtained with gold sodium thiosulphate?

DR. PARKHURST: Recently I saw in New York an apparent cure in a small lesion diagnosed histologically as lupus vulgaris. In treating lupus erythematosus, the period of treatment, as I have noted in two of my own cases, must sometimes be prolonged to obtain satisfactory results.

DR. SHAFFER: In our series of cases of lupus erythematosus, the results of treatment with gold compounds have been good in about 75 per cent of the patients treated. One patient with erythema induratum was treated without improvement, and the same was true of a patient with lupus vulgaris. A case of pityriasis rubra pilaris cleared up, and a patient with an old tuberculous sinus of the neck is doing well, but the quartz lamp is also being used in the latter case.

DR. KEIM: We have used the gold compound in a case of tuberculosis verrucosa cutis, without benefit. We should be conservative in our attitude regarding this drug. It apparently succeeds in about 60 per cent of certain types of lupus erythematosus.

ACTINOMYCOSIS. Presented by DR. GEORGE VAN RHEE.

B. H., a boy, aged 5, first developed small papulopustular lesions on the scalp at the age of 1½ years. These appeared at varying intervals. Two years before the time of presentation, several small abscesses appeared on his scalp and coalesced. One year later the child had varicella, and scratched his right thigh; an abscess developed at that site. At the time of presentation there were large abscesses with fistulous tracts on the neck, scalp and right thigh. The discharge was malodorous and purulent. The ray fungus having been found, potassium iodide was being administered in increasing doses.

DERMATITIS HERPETIFORMIS. Presented by DR. GEORGE VAN RHEE.

C. M., a girl, aged 3, had been having recurrent outbreaks of intensely pruritic vesicles and pustules on her arms, legs and back for one year. There were grouped excoriated lesions on the buttocks, shoulders, forearms and legs, with some scarring and hyperpigmentation. The child was very irritable.

DISCUSSION

DR. BIDDLE: Some time ago Dr. Wollenberg and I saw this patient, and at that time we thought the condition was pemphigus on account of the large bullae.

MULBERRY MOLARS IN CONGENITAL SYPHILIS. Presented by DR. L. W. SHAFFER.

A negro child, aged 9, presented marked dental aplasia, and the 6 year molars were excellent examples of the "Fournier tooth" or "mulberry" or

"honey-comb" molars. The Wassermann reaction was strongly positive, and the mother had had two miscarriages. The incisor teeth were not hutchinsonian.

MULTIPLE SEBACEOUS CYSTS. Presented by DR. SCHILLER and DR. SCHLEGELMILCH.

M. M. G., aged 43, a housewife, had first noticed small tumors on her neck at the age of 12. The axillae, chest, abdomen, inguinal regions and forehead were subsequently involved. Some of the lesions on the forehead were said to have disappeared spontaneously. The size of the tumors varied from that of a small pea to that of a cherry. They were firm and painless, and the overlying skin was of normal appearance, except in a few in which it was somewhat opalescent.

EROSIO INTERDIGITALIS BLASTOMYCETICA. Presented by DR. SCHILLER and DR. SCHLEGELMILCH.

Y. D., a Russian Jewess, aged 44, had had erosions between the third and fourth fingers of the left hand for twenty-eight years. Within a few months, the condition had involved all of the other interdigital webs. The involved areas were grayish-white and necrotic, with an erythematous base, and subjective symptoms were not noted. The diagnosis had been made with the aid of cultures and smears. The patient's daughter had a similar lesion between two fingers.

PITYRIASIS ROSEA IN A NEGRESS. Presented by DR. SCHILLER and DR. SCHLEGELMILCH.

H. H., a girl, aged 12, had first noticed the eruption on her neck three weeks previously. The trunk and thighs had been involved later. There were many slightly elevated, scaling ovoid patches, varying in size from that of a pinhead to that of a dime, which followed the lines of cleavage of the skin. There was some pruritus.

A CASE FOR DIAGNOSIS. Presented by DR. R. C. JAMIESON.

B. P., a Russian Jew, aged 56, a shoemaker, had first noticed an eczematoid eruption in the genitocrural region seven months previously. The trunk and extremities had become involved, with scattered erythematous plaques. There was intense pruritus. All of the lesions were discrete, erythematous plaques, slightly elevated and infiltrated, with slight or no scaling; and varying in diameter from 2 to 5 cm. They were irregularly rounded or oval, and did not have any apparent areas of predilection. New plaques had been appearing up to the time of presentation, and a few of the older lesions had improved somewhat under mild roentgen-ray therapy. There was a general lymph node enlargement, and the few remaining teeth were in very bad condition. The past history was apparently irrelevant.

DISCUSSION

DR. BIDDLE: I would suggest a diagnosis of early mycosis fungoides.

DR. KEIM: I agree with Dr. Biddle because of the infiltration and shape of the lesions, especially on the legs.

DR. SHAFFER: The involvement of the lymph nodes suggests that the eruption may be based on a leukemia or Hodgkin's disease. A blood count should be made.

DR. KEIM: I have seen a typical eruption of mycosis fungoides in a patient with leukemia.

H. J. PARKHURST, M.D., Reporter.

Book Reviews

DIE MALARIATHERAPIE DER SYPHILIS. VON DR. JOSEF MATUSCHKA und DR. RUDOLF ROSNER, mit einem Vorwort von Professor DR. ERNEST FINGER. Berlin: Julius Springer, 1927.

This monograph of about eighty pages presents the results of work which was begun by the late Kyrle in 1922 and carried on to conclusion by the authors, who were associated with him in the work. Kyrle and his co-workers have applied the inoculation of malaria not only in cases of neurosyphilis, but in a large number of cases of other forms of syphilitic infection, including early syphilis of all types, syphilis complicated by gravidity, congenital syphilis and visceral syphilis. Combined with this was a course of treatment with neoarsphenamine.

In addition to the treatment of patients with active syphilis, the authors subjected a large number of patients with latent and asymptomatic syphilis with positive Wassermann reactions to the malarial regimen in an endeavor to determine the effect of such treatment on the Wassermann reaction. In general, the malaria was allowed to persist until eight or ten chills had occurred. It was then arrested by intravenous injections of quinine. The treatment with neoarsphenamine was carried out in some cases before and in some cases after the malaria, and, generally speaking, for adults a total amount of 3 Gm. was used. Patients who had lesions of the heart, aneurysms or other visceral complications were not regarded as good risks for the treatment.

The number of patients treated over this period of time was more than 500, and the effect of the treatment on the clinical symptoms and serum reactions was extraordinary. In fact, if the work can be corroborated, the results have no parallel by any other form of treatment. In early syphilis, that is, in cases of syphilis of not more than two years' duration, the Wassermann reaction became negative in 99.1 per cent and have remained so. Reactions with the spinal fluid in cases in which early neurosyphilis occurred became negative in all cases. Occasionally, however, clinical recurrences occurred somewhat more often than did recurrences in the spinal fluid. In late syphilis, including latent cases, the same degree of biologic cure was not obtained, but in this group also the results were far superior to those that have occurred in any other form of treatment. Thus, in this group it was possible to bring about a negative reaction in 61 per cent of the cases in which the reaction had been positive and to weaken the reaction in an additional 27.1 per cent. Seropositive recurrences were not found in any cases in this group. In the group of patients with late syphilis with positive reactions in the spinal fluid, the reactions became negative in 55.7 per cent and an additional 43 per cent showed a weakening of the reaction.

In pregnant women with syphilis the treatment resulted in the birth of living children, and in this group the treatment did not seem to have any risk for the mother or child, and was most effective in protecting the child from congenital infection.

Generally speaking, the blood and spinal fluid were influenced less in the congenital than in the acquired form of syphilis. In this group the results were not strikingly different from those which could be produced by other forms of treatment.

The rapid disappearance of clinical symptoms and the striking effect on the biologic phases of the disease in its various forms as recorded in this monograph will establish this form of treatment as a marked advance in therapy. Results of so startling a nature, before the universal application of the treatment, should result in further observation as they deserve corroboration from other sources.

X-Rays and Radium in the Treatment of Diseases of the Skin. By George M. MacKee. Pp. 788, 8 large volumes. Philadelphia: Lea & Febiger, 1927.

All dermatologists will be glad to learn of the new edition of Dr. MacKee's book on radiotherapy. The first edition appeared in 1921 and promptly became the recognized American handbook on the subject. The popularity of the first edition long ago warranted the appearance of a second. MacKee, however, is one whose work is always characterized by scrupulous care, and doubtless he was unwilling to produce a new edition until he could take the time to give it the most thorough and careful preparation. This new edition will maintain the reputation of the first edition. It brings the subject completely down to date. The work is considerably larger than the previous edition and not only contains all of the latest additions to the technic of the use of roentgen rays and radium, but has considerably expanded the parts on the principles of radiotherapy. In spite of its completeness, however, the work is not oversized. The author has covered the whole subject in 760 pages of text, in which all necessary illustrations are included. That is something of a feat of condensation which adds greatly to the value of the book and which is evidence of mastery of the subject. As in the other edition, however, the chief value of the book is not its completeness, but its sanity, its frank scientific honesty, the care and clearness with which all topics have been considered. The work easily remains the best exposition of radiotherapy in dermatology, and its contents should be familiar to every one who undertakes to do this work.

Through this work MacKee has done more than any one else to standardize and crystallize our knowledge of radiotherapy in dermatology. That is an achievement in which he should take pride.

Choroby Skory. By Dr. Franciszek Krzysztalowicz, Professor of Dermatology University of Warsaw.

A treatise on diseases of the skin by Professor Franciszek Krzysztalowicz has been received. It is in Polish, and unfortunately, therefore, its reading is beyond the ability of the reviewer. It is, however, a privilege to call attention to this evidence of activity in Polish dermatology. It can be said at least that it has a large collection of beautiful illustrations in black and white.

Directory of Dermatologic Societies

NATIONAL DERMATOLOGIC SOCIETIES*

AMERICAN DERMATOLOGICAL ASSOCIATION

Otto H. Foerster, President, Colby-Abbot Bldg., Milwaukee.
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